

FIG. 1A

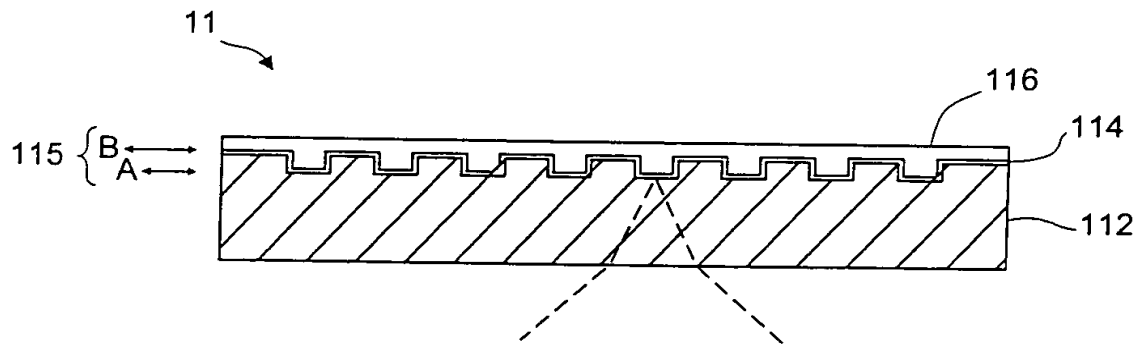


FIG. 1B

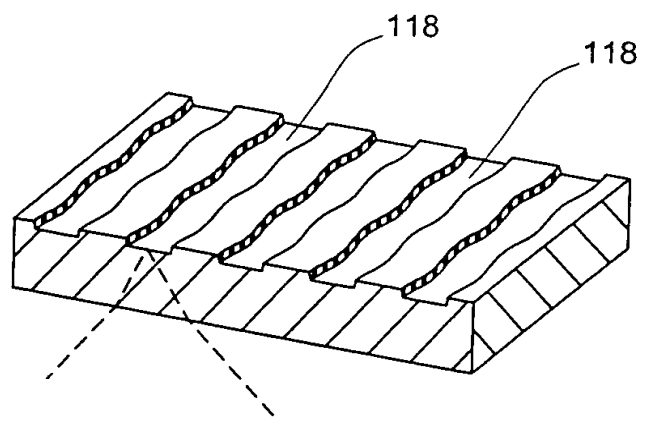


FIG. 1C



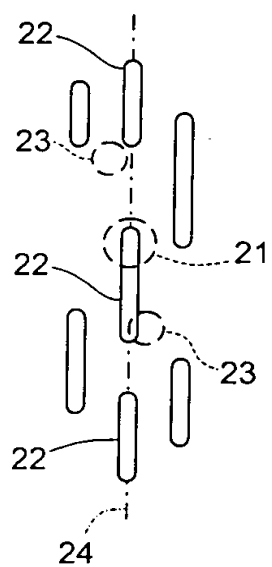


FIG. 2A

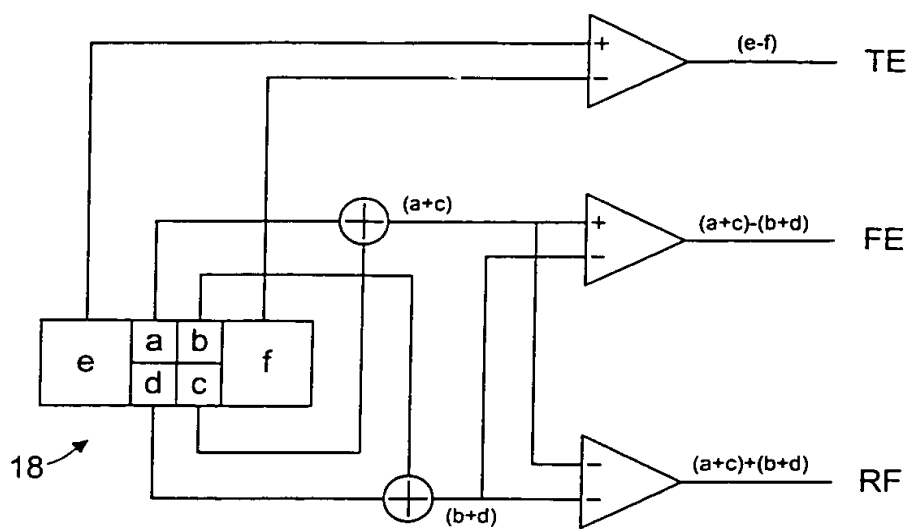
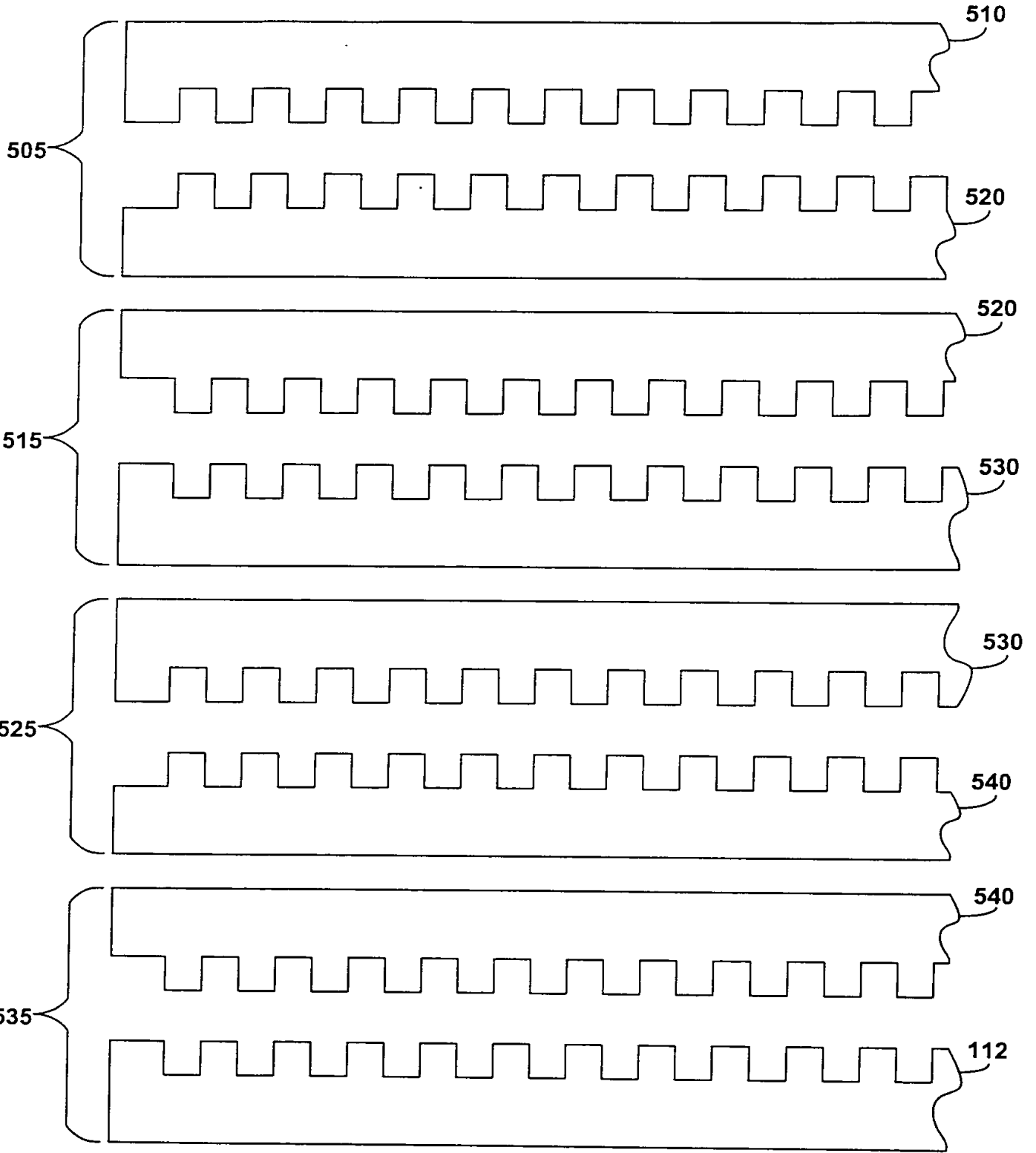


FIG. 2B

+

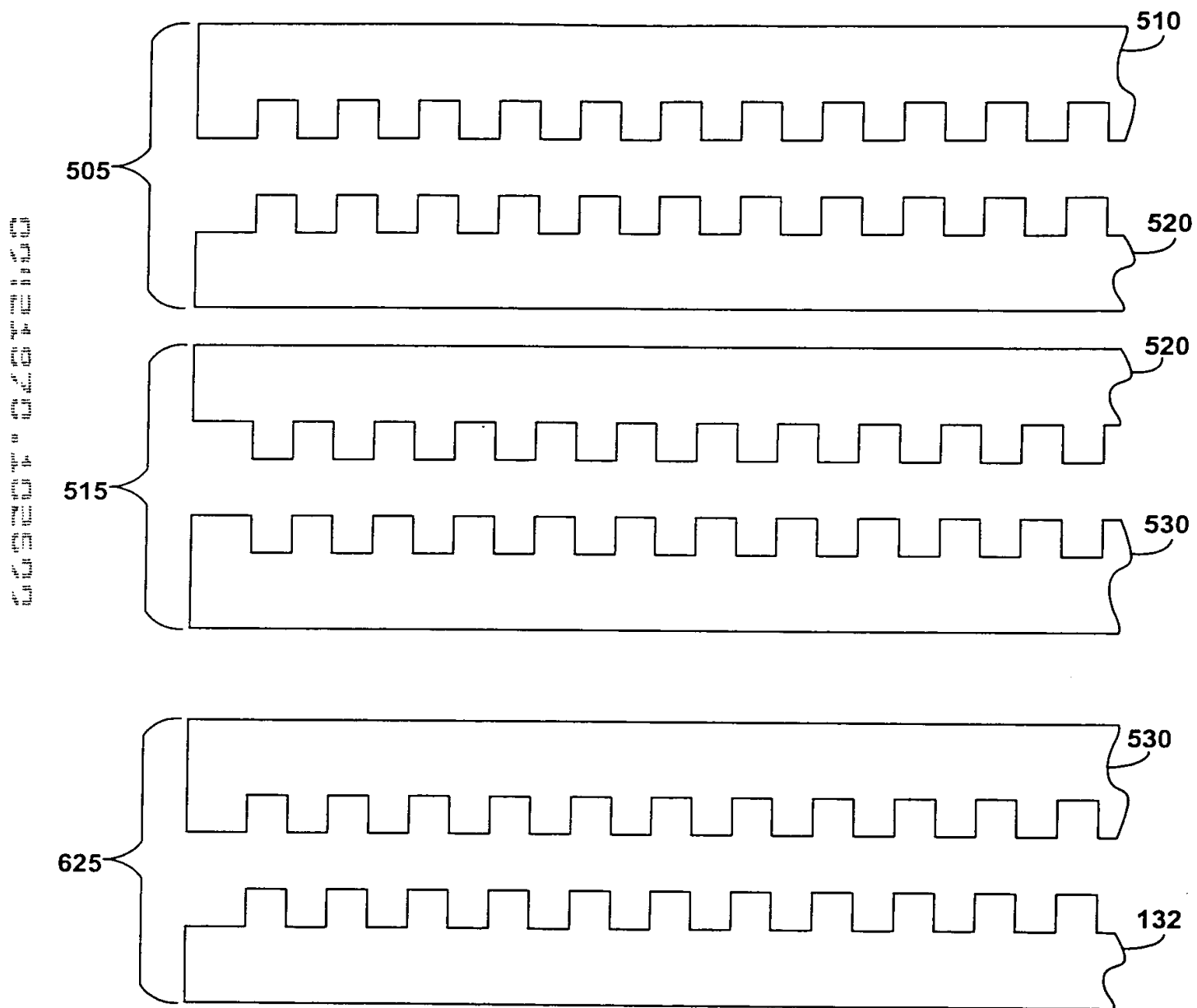
FIG. 3A



+

+

FIG. 3B



+



FIG. 3C

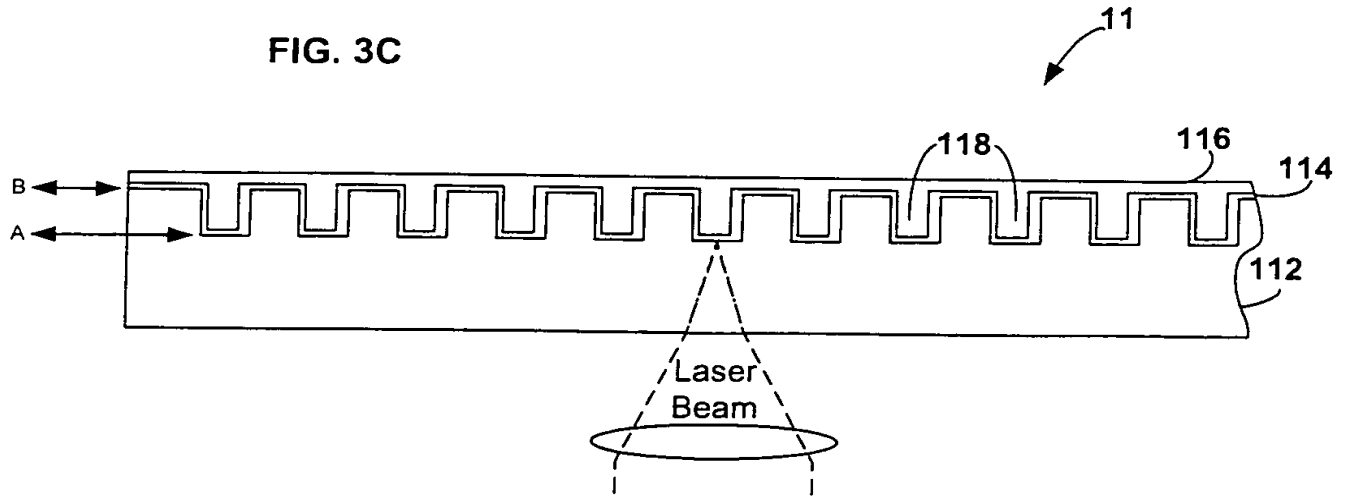


FIG. 3D

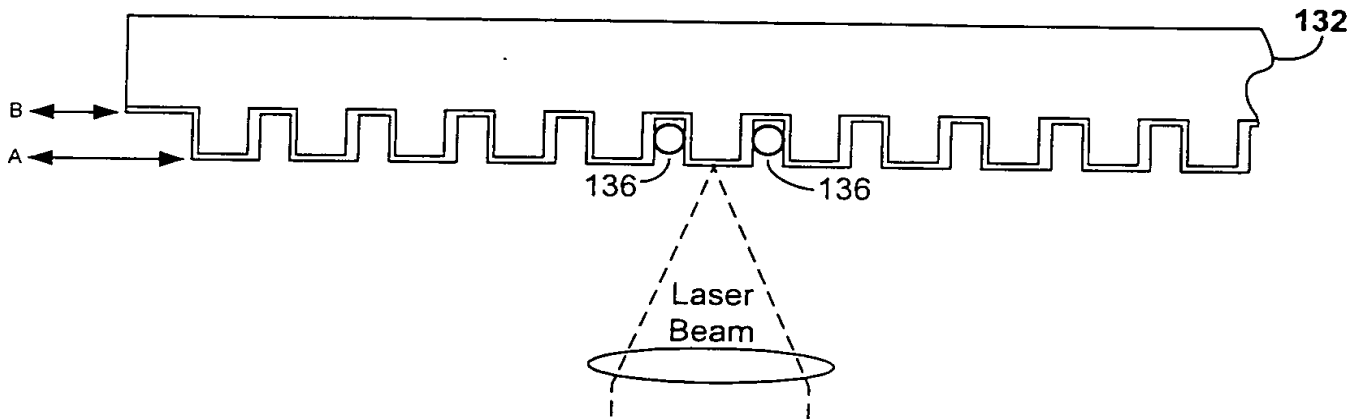
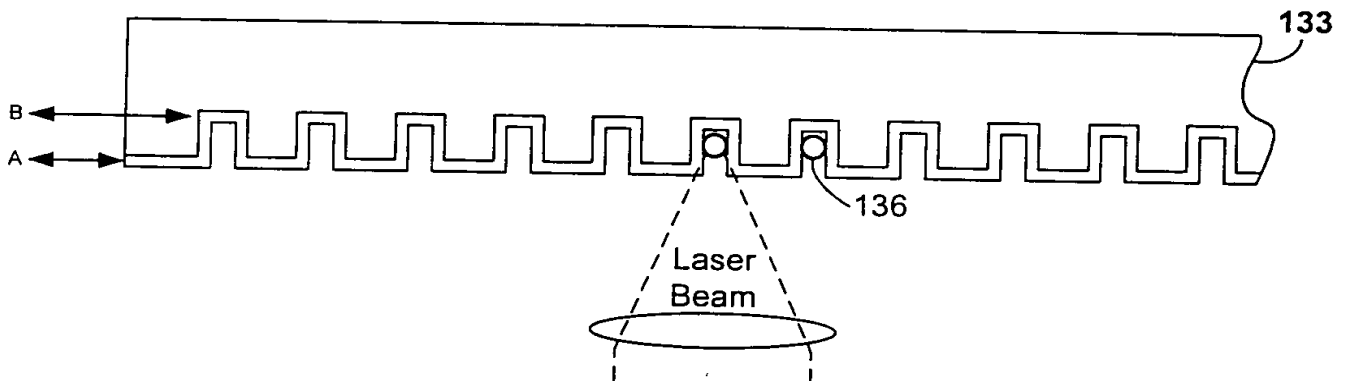


FIG. 3E



+

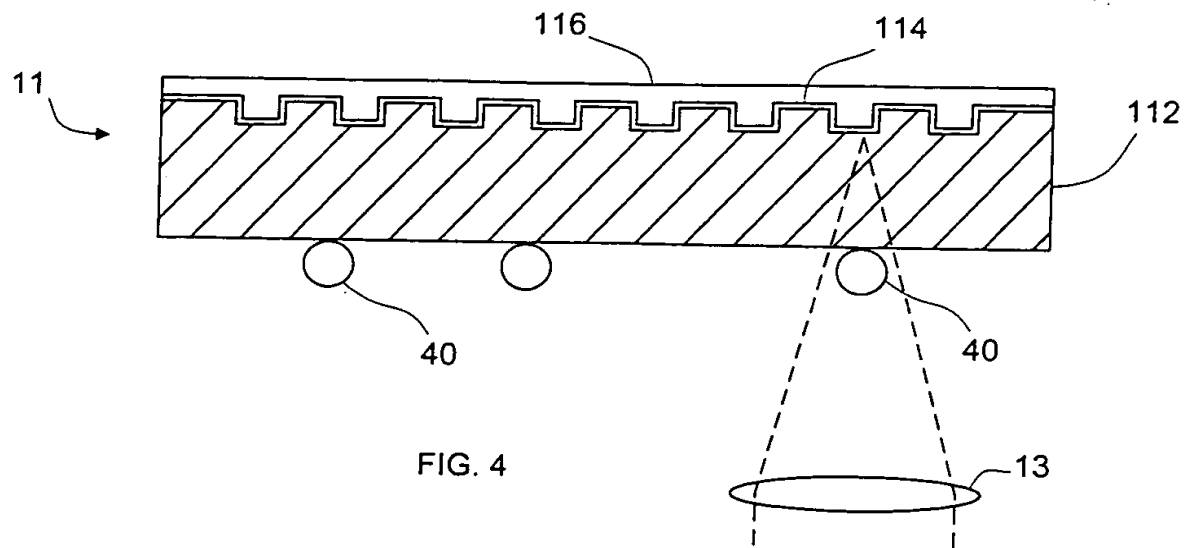


FIG. 4

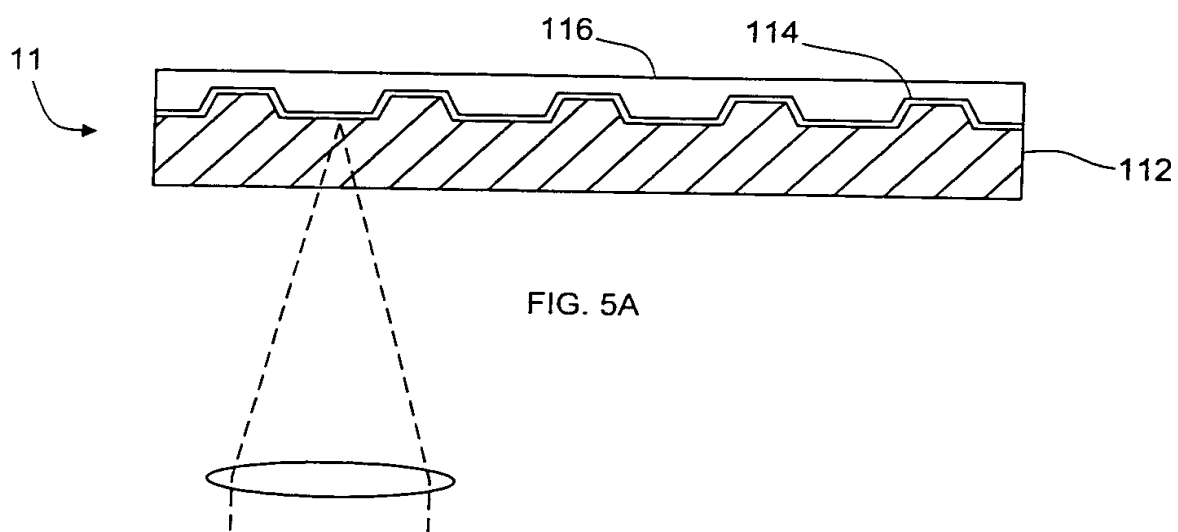


FIG. 5A

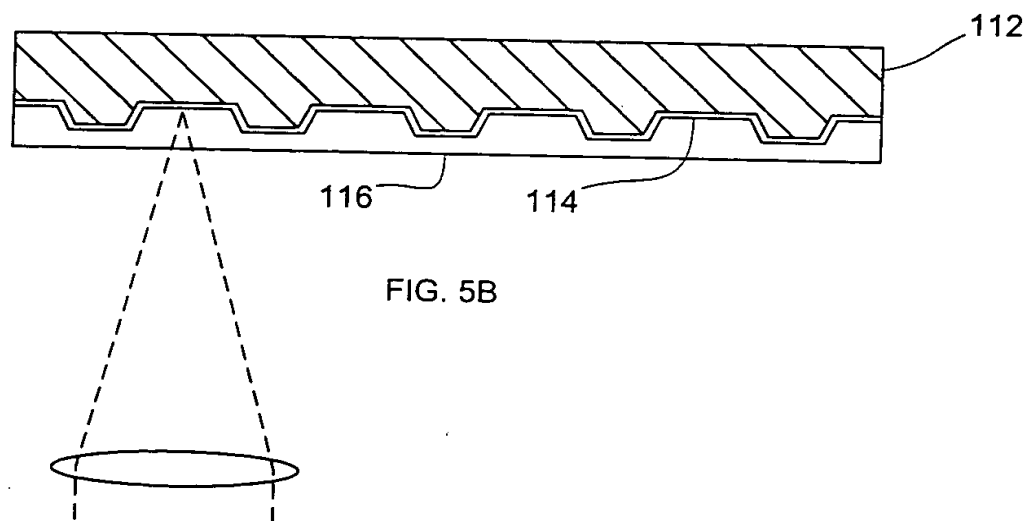


FIG. 5B

+

+

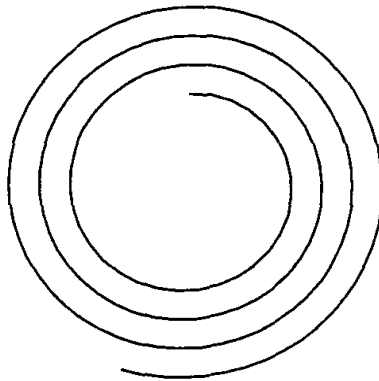


FIG. 5C

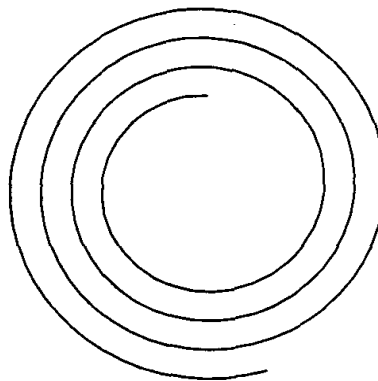


FIG. 5D

+

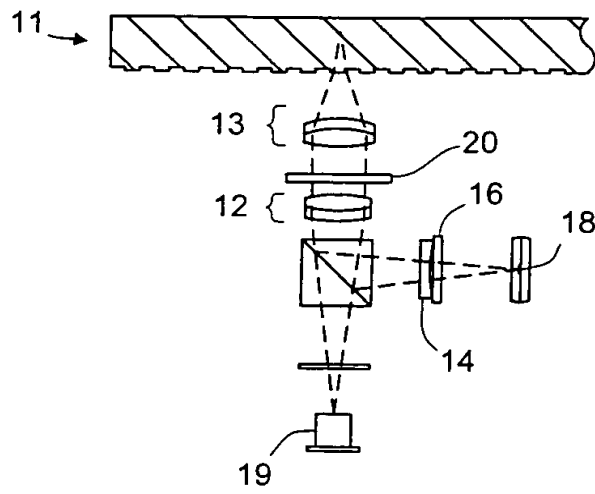


FIG. 6A

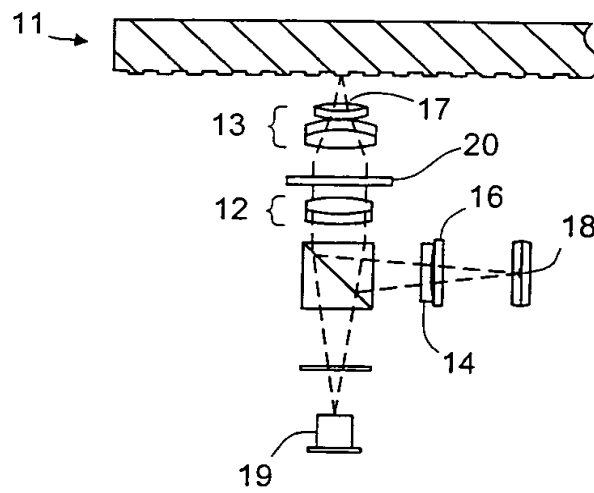


FIG. 6B

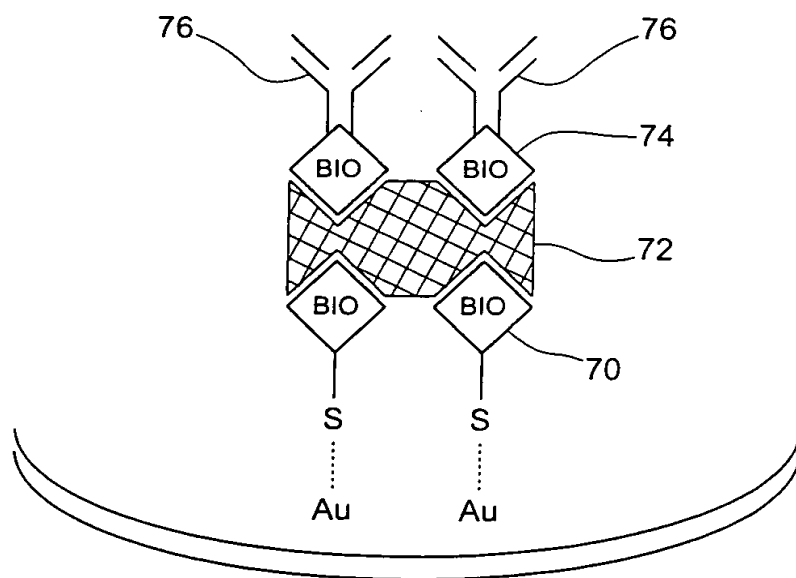


FIG. 7A

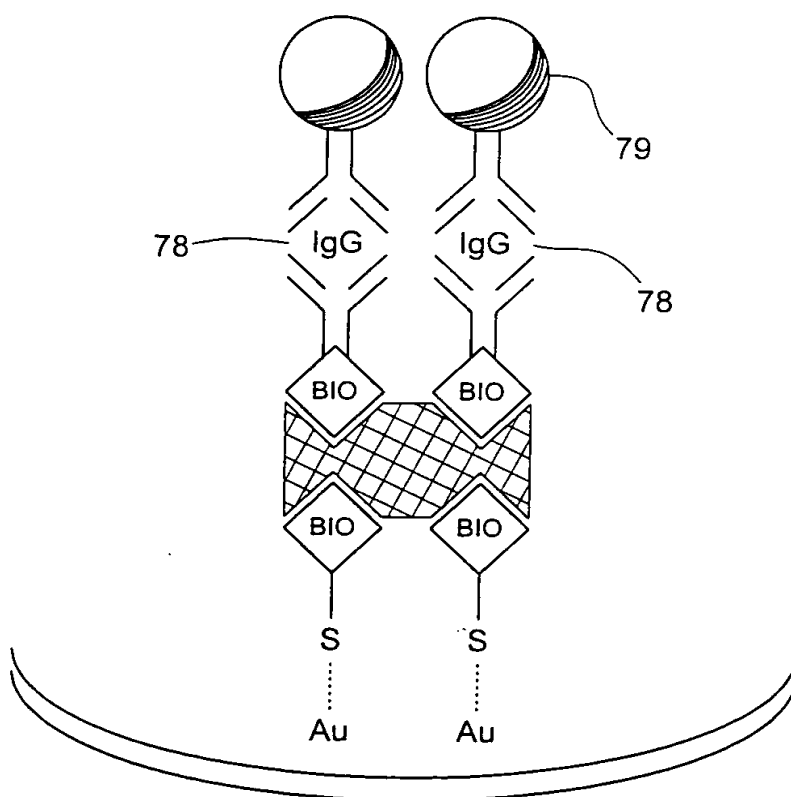


FIG. 7B

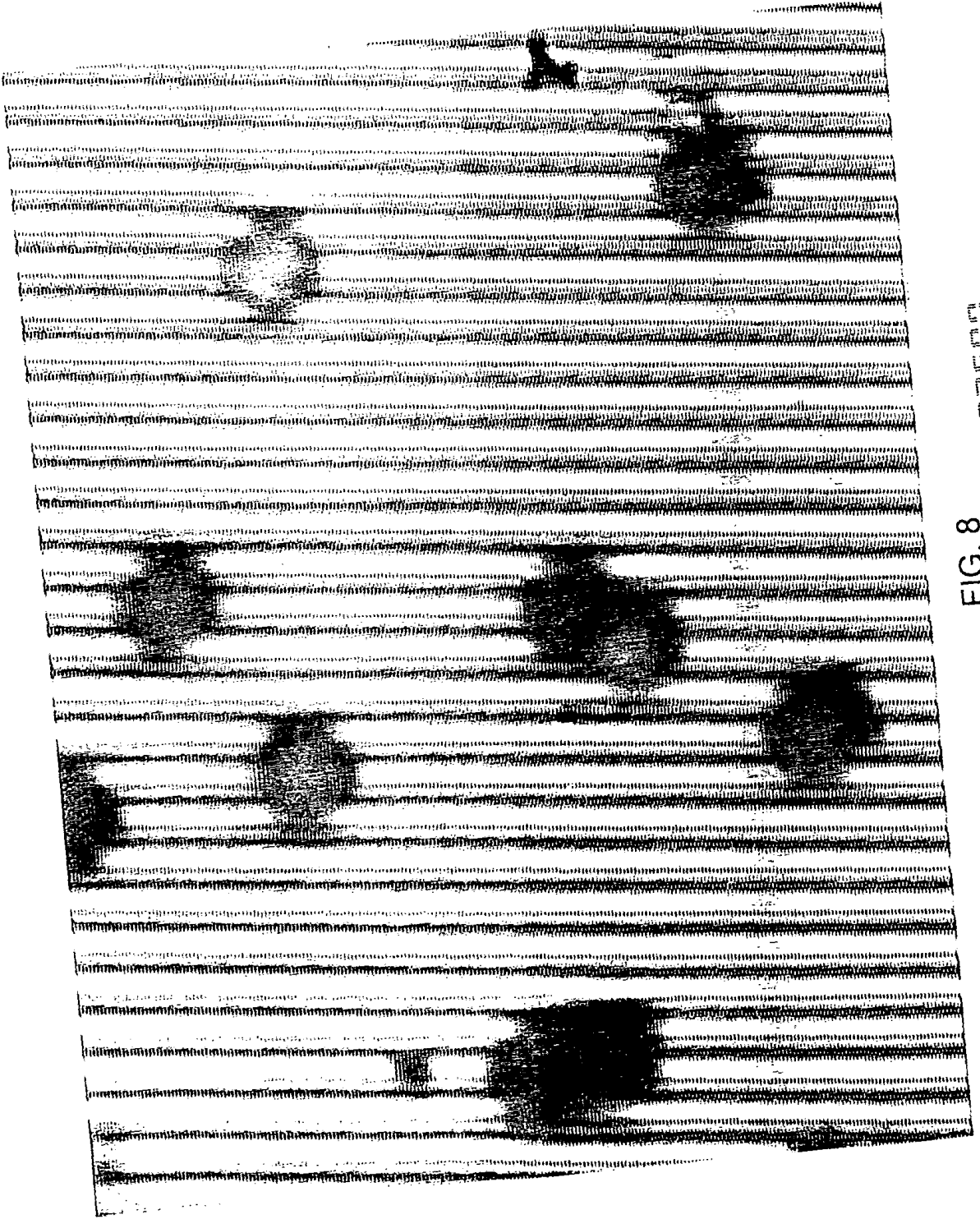


FIG. 8
A scan of a document page with heavy noise and degradation.

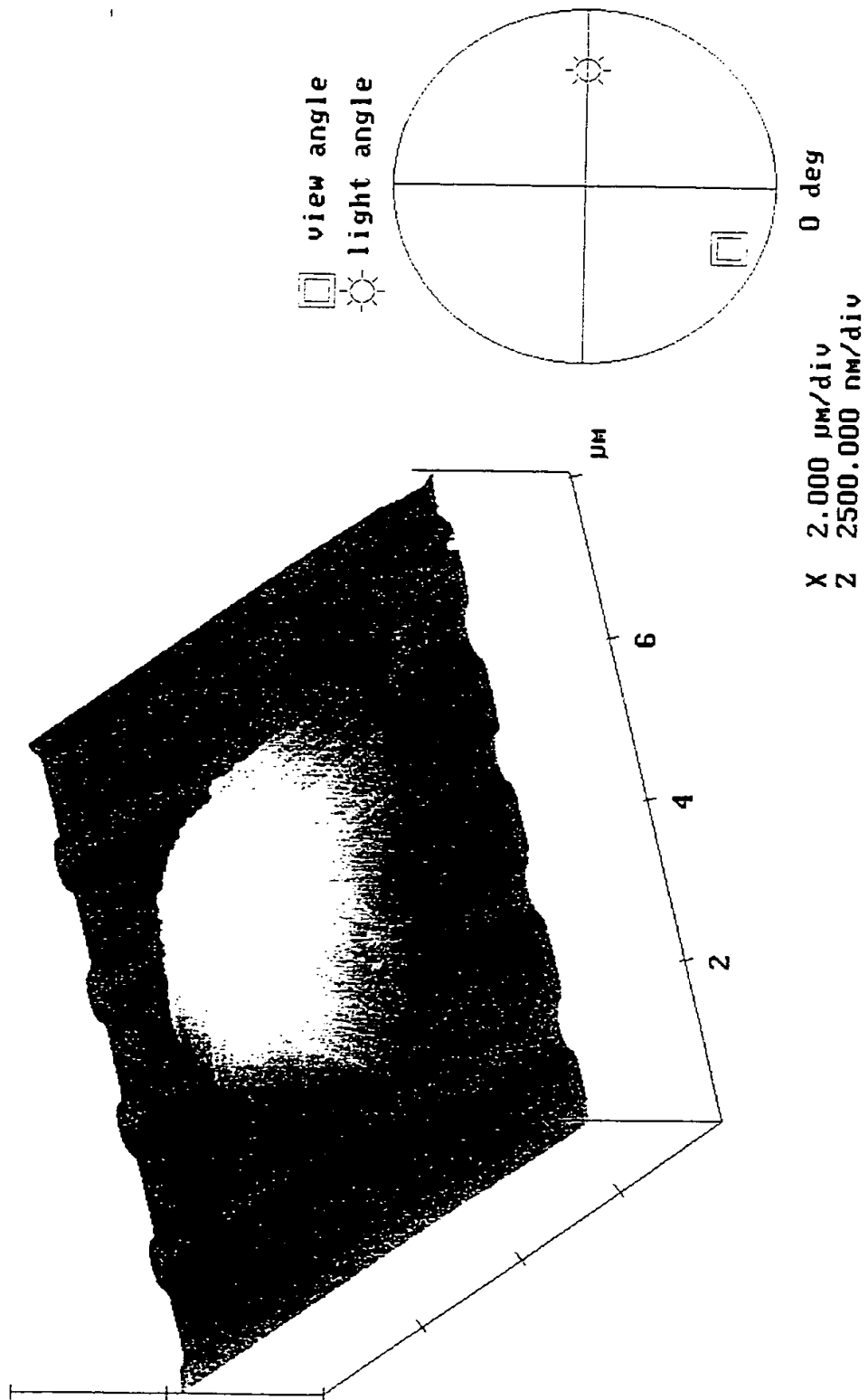
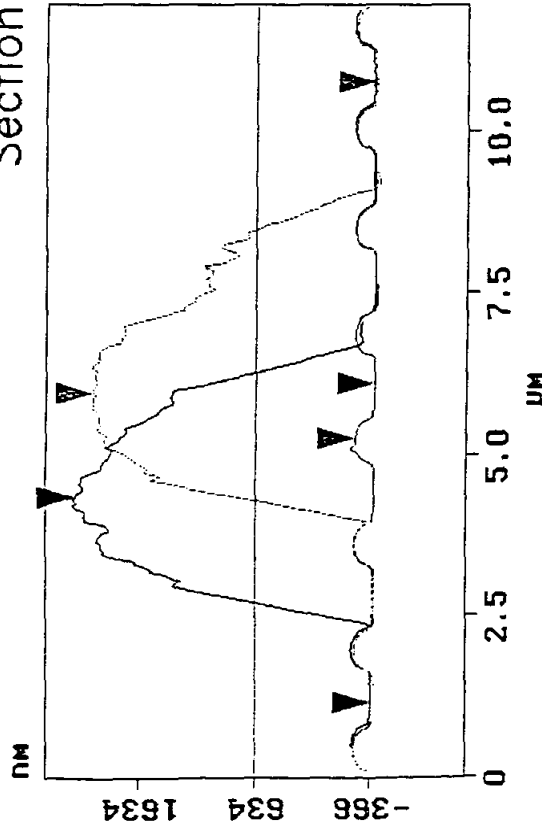


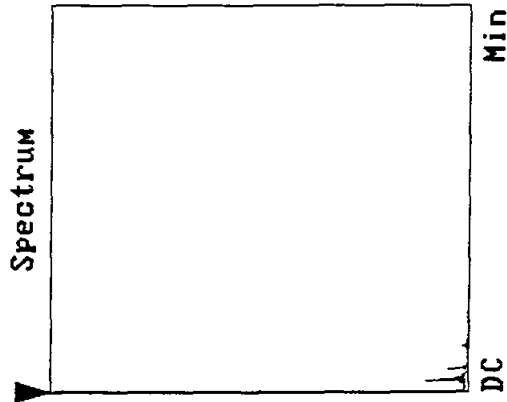
FIG. 9

Cursor Marker Spectrum Zoom Center Line Offset Clear

Section Analysis



L	843.75 nm
RMS	63.849 nm
Lc	DC
Ra(Lc)	27.782 nm
Rmax	97.447 nm
Rz	96.754 nm
Rz Cnt 2	
Radius	450.61 nm
Sigma	62.095 nm



Sphere on Wobble Groove
grating.014

Surface distance	6.867 μm
Horiz distance(L)	4.828 μm
Vert distance	2.445 μm
Angle	26.858 deg
Surface distance	894.27 nm
Horiz distance	843.75 nm
Vert distance	169.96 nm
Angle	11.389 deg
Surface distance	5.302 μm
Horiz distance	3.211 μm
Vert distance	2.568 μm
Angle	38.649 deg
Spectral period	DC
Spectral freq	0 Hz
Spectral RMS amp	461.26 nm

Cursor: fixed 3 Zoom: 2:1 Cen line: off Offset: on

FIG. 11

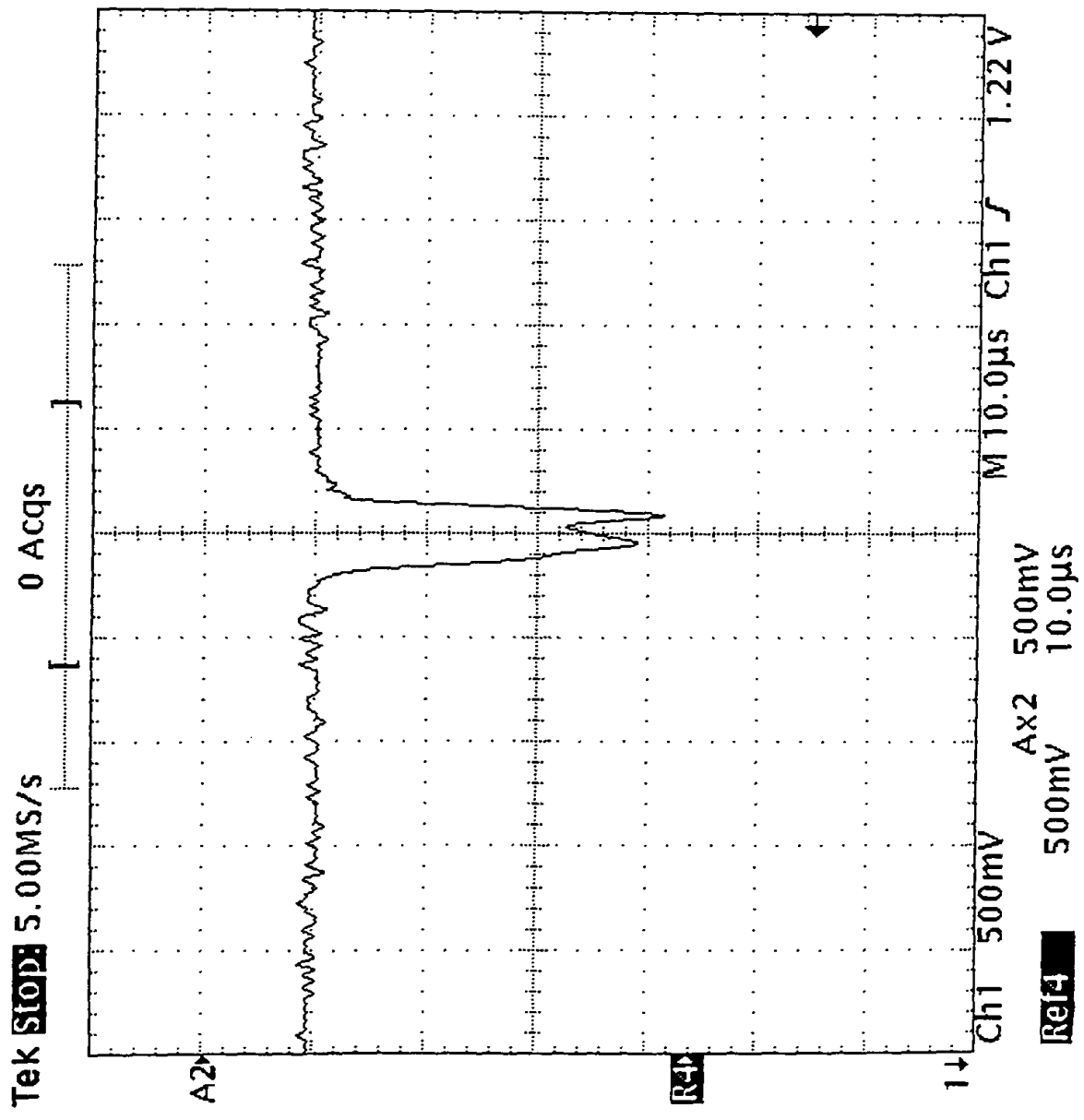


FIG 13

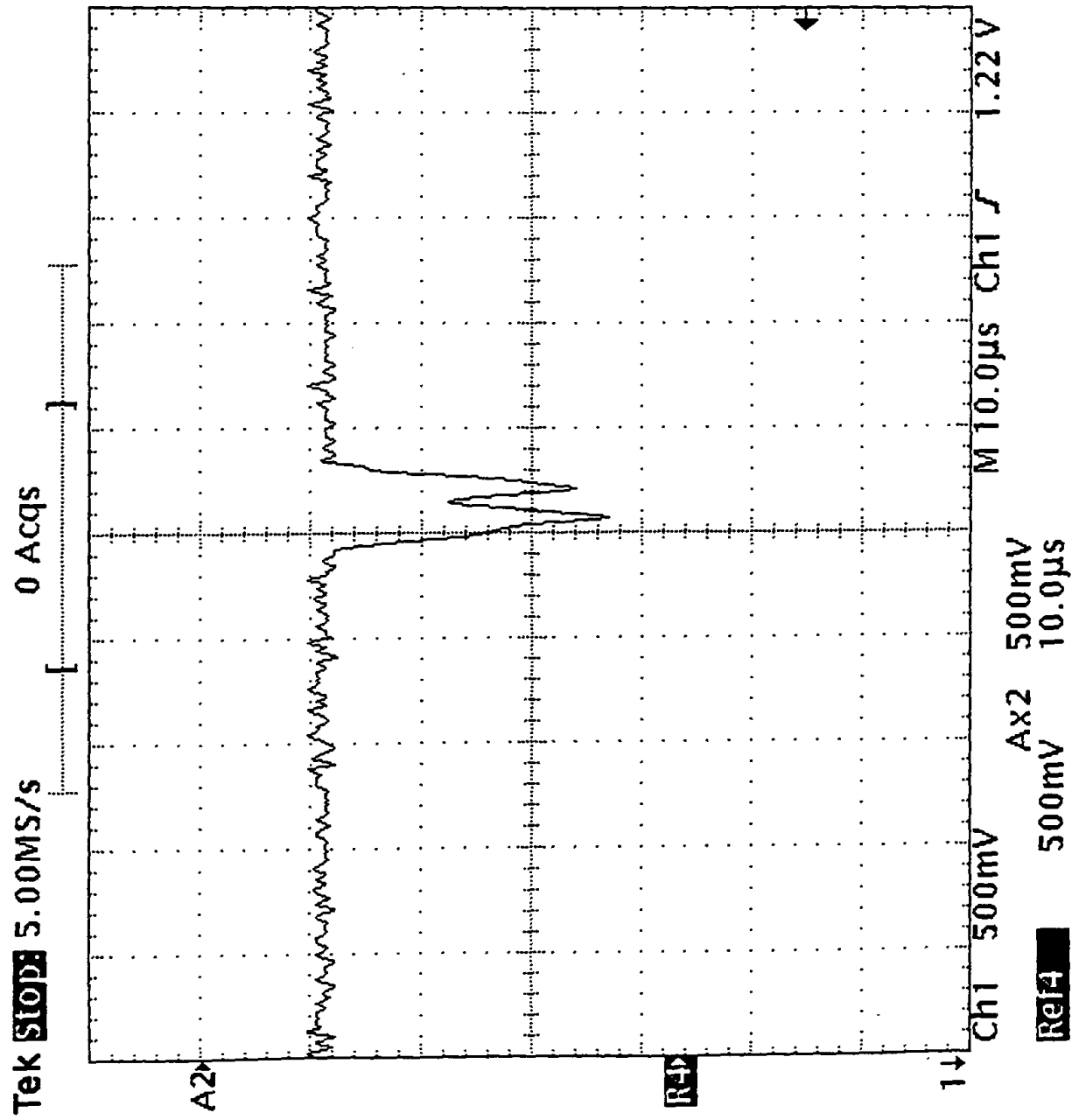


FIG. 14

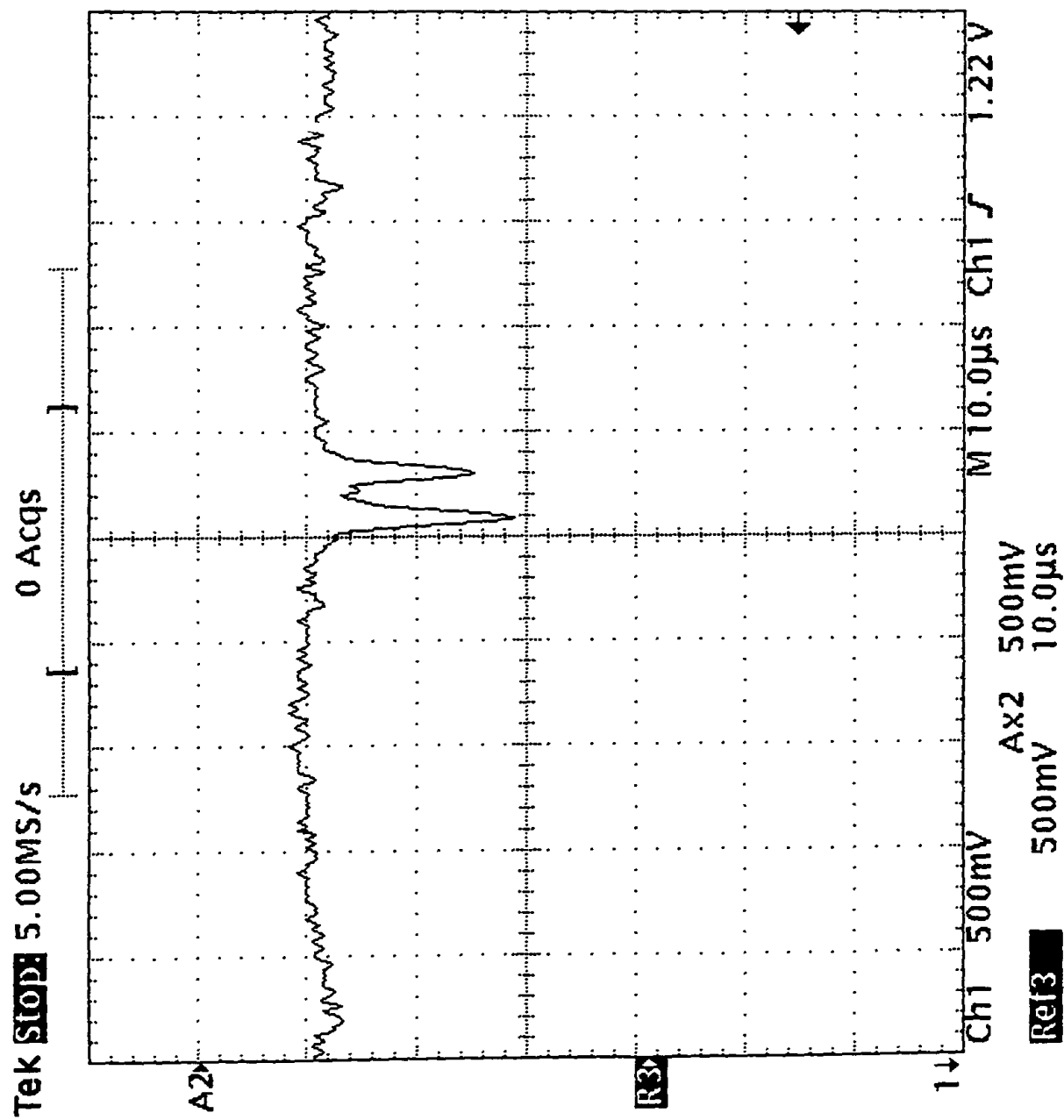


FIG. 15

Copyright 2000 by Analog Devices, Inc.

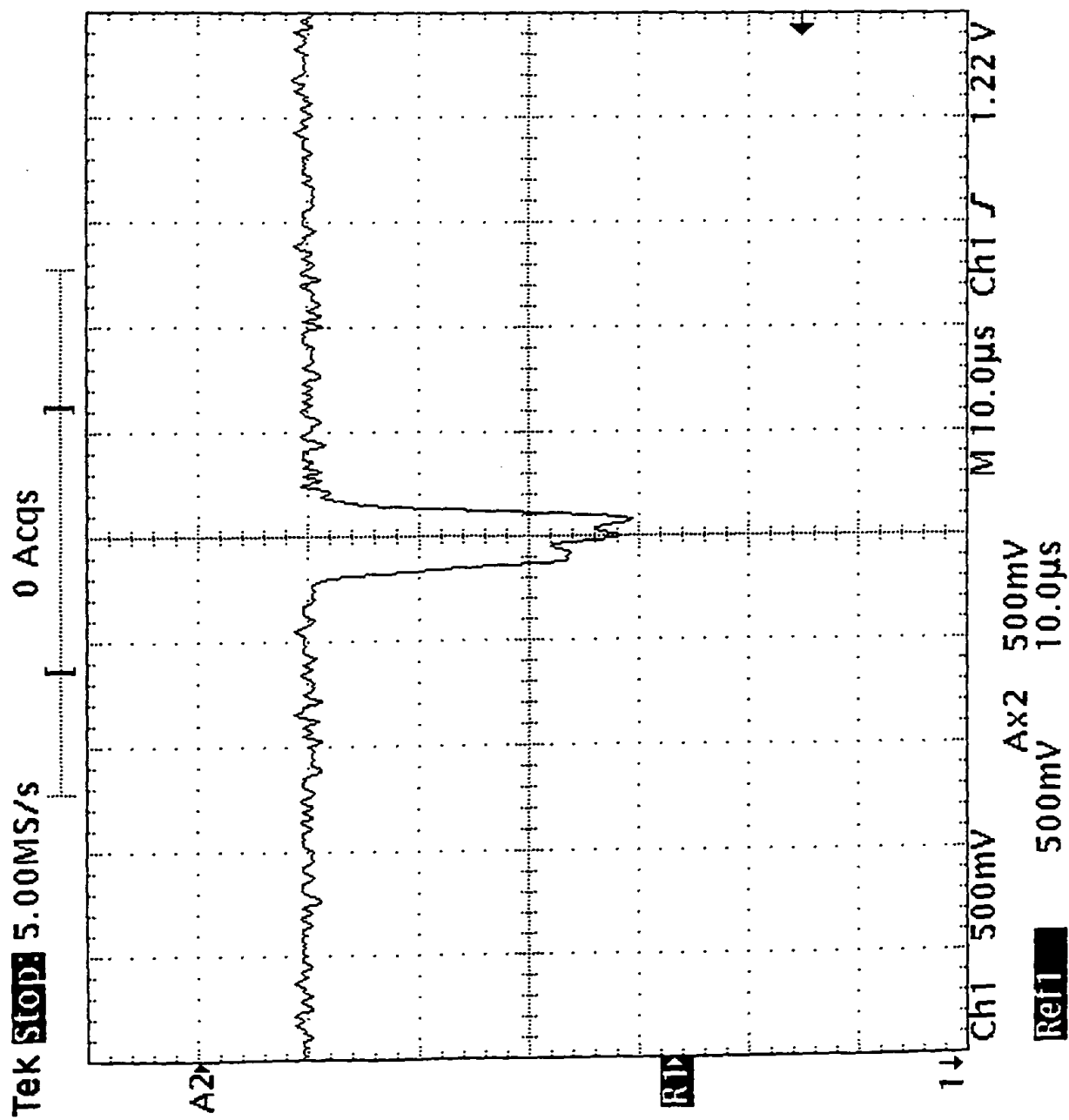


FIG. 16

The first of the above equations in group 1, which appears in the first column, and the second of the above equations in group 2, which appears in the second column, are the same.

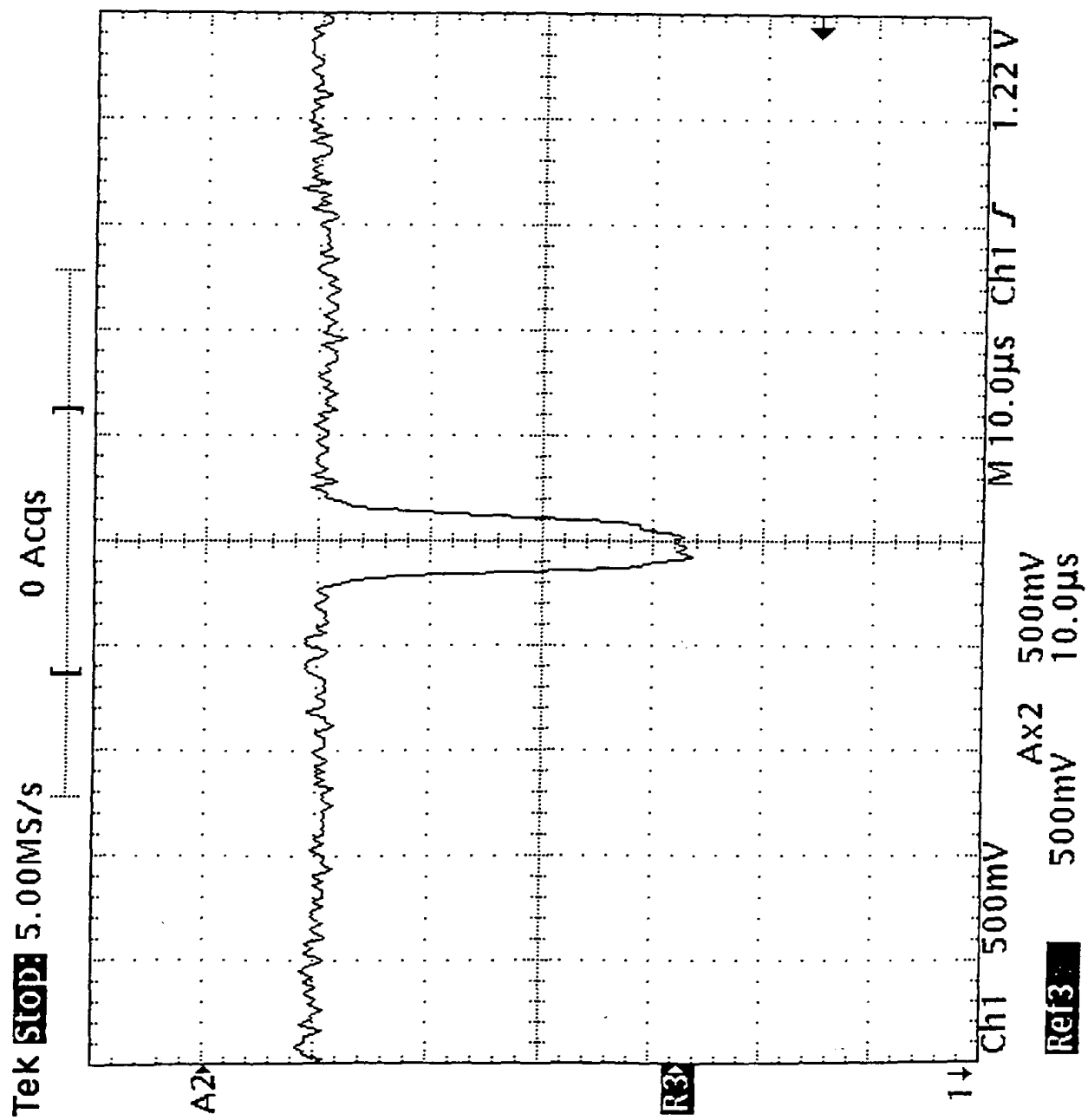


FIG. 17

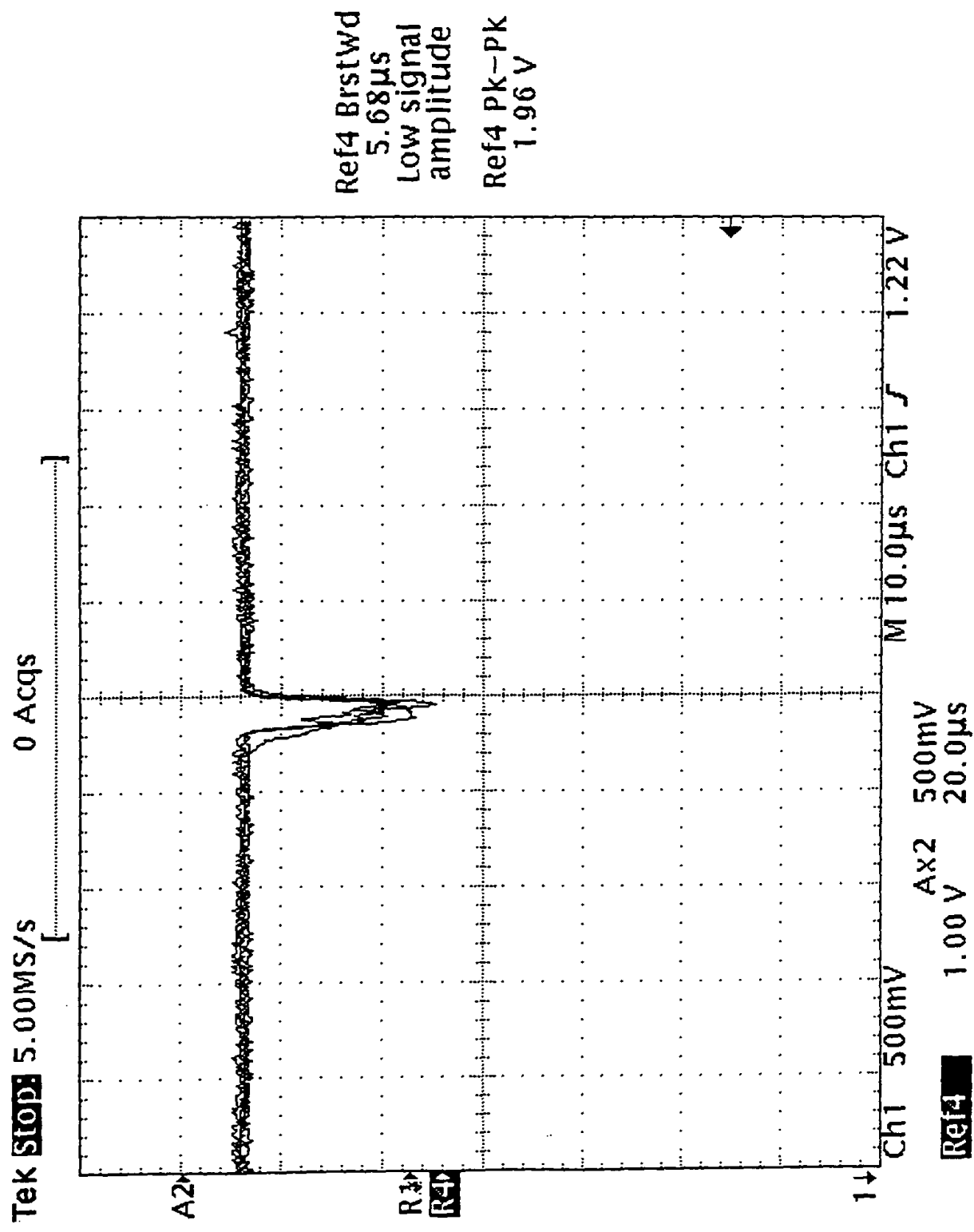


FIG. 18



FIG. 19

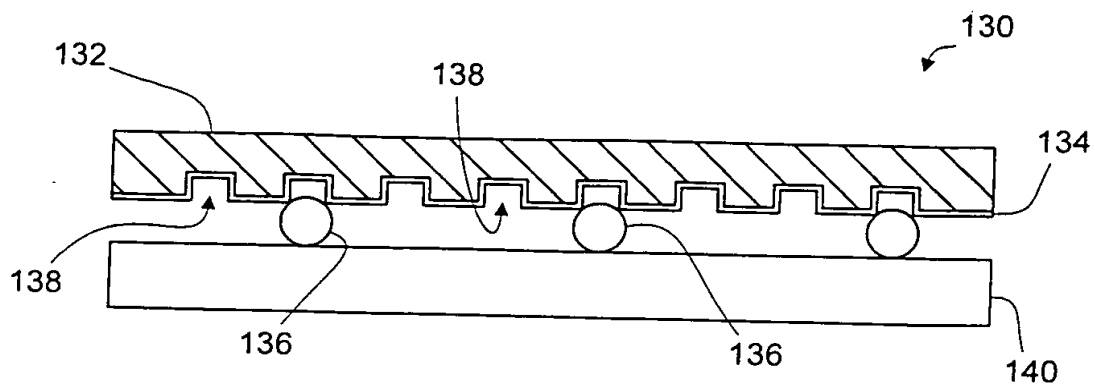


FIG. 20

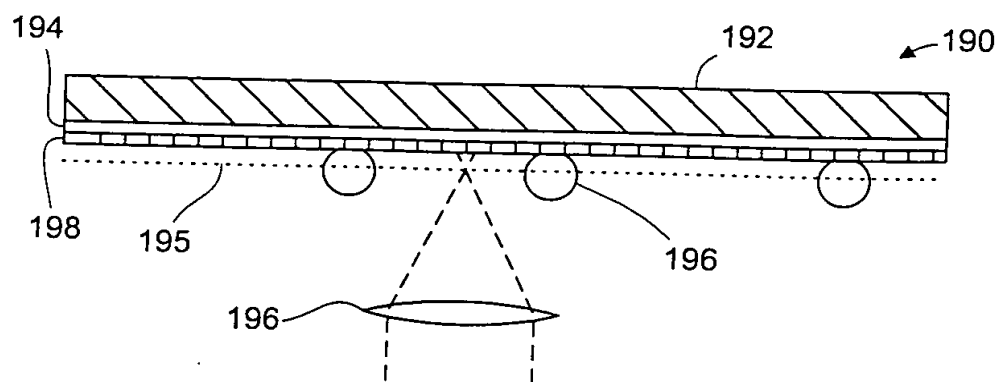
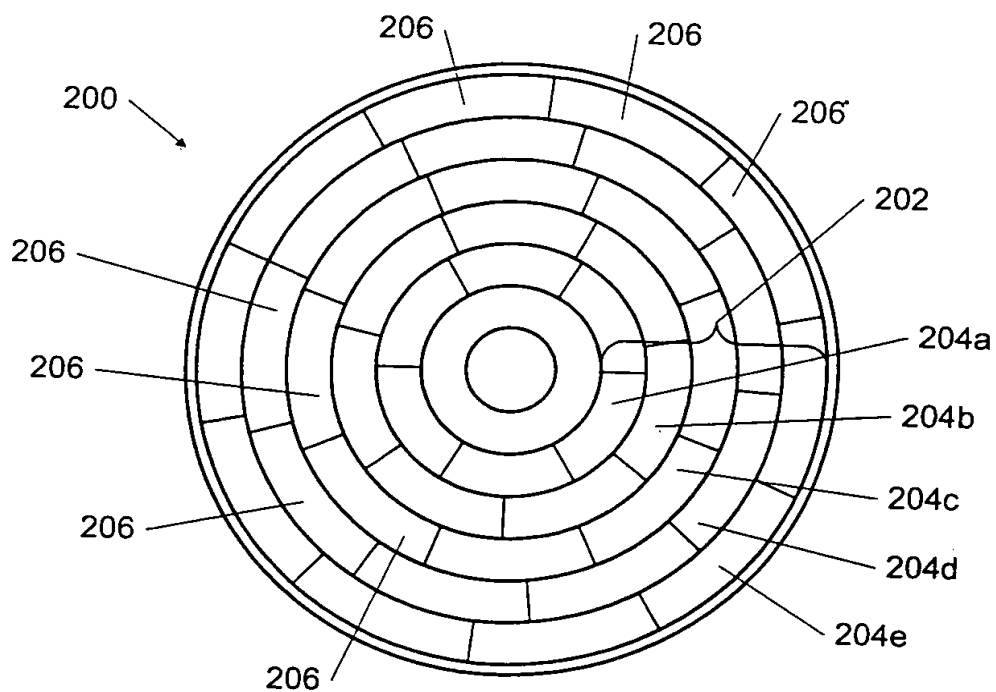


FIG. 21



+

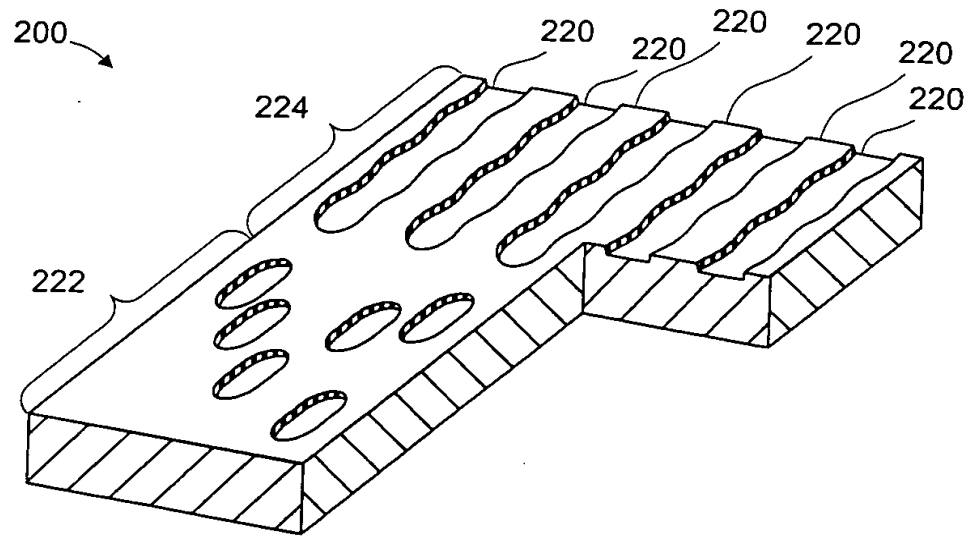


FIG. 22

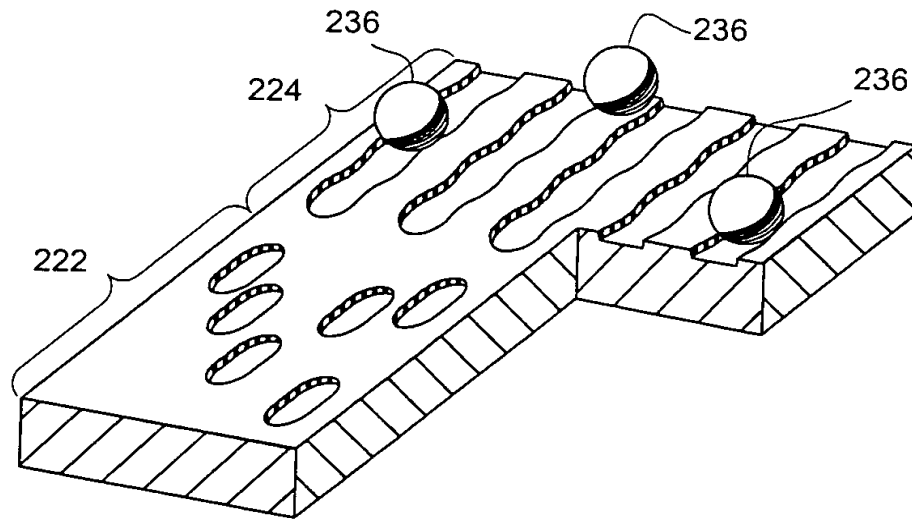


FIG. 23

+

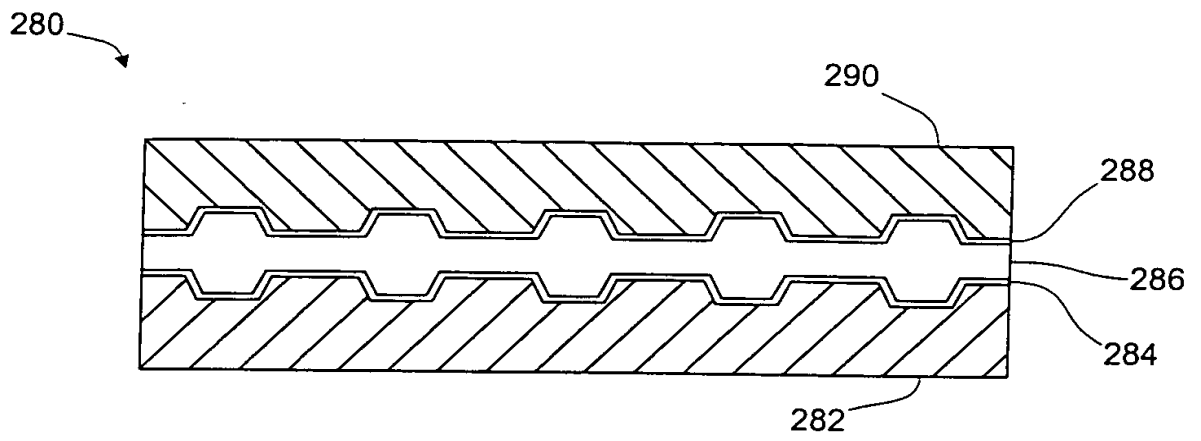


FIG. 24

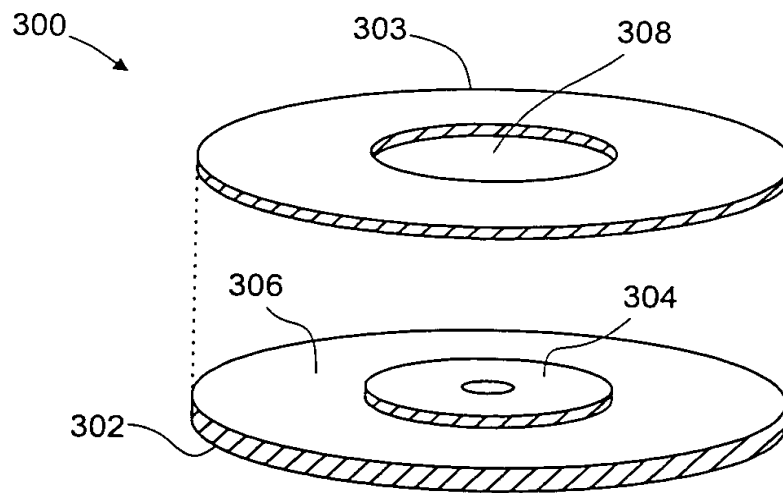


FIG. 25

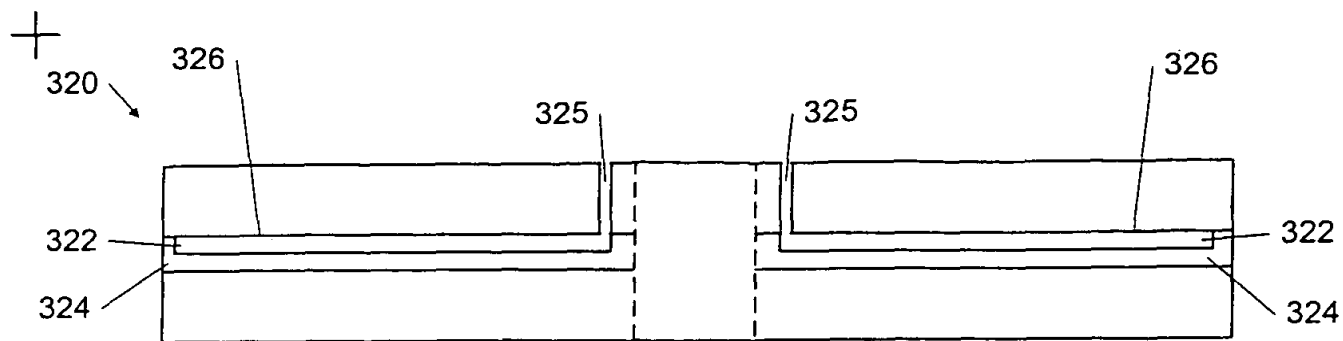


FIG. 26

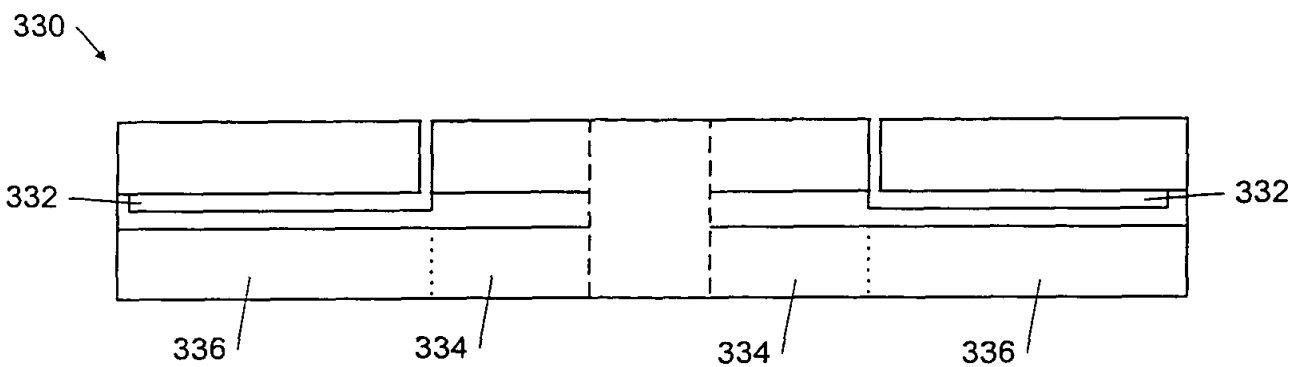


FIG. 27

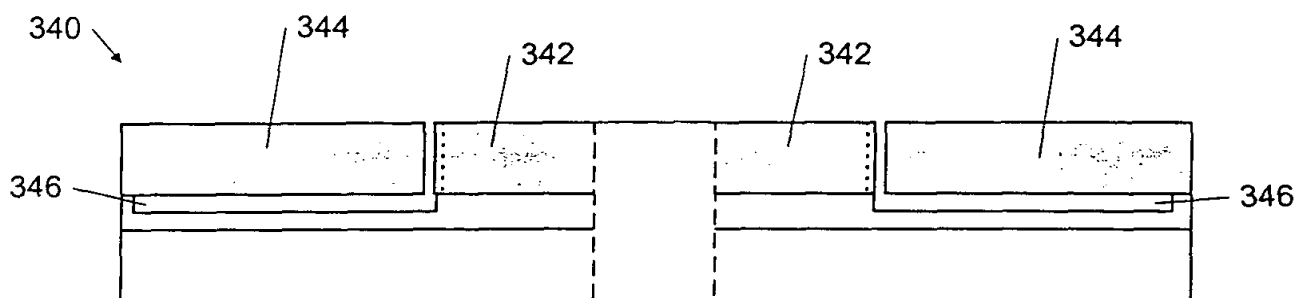


FIG. 28

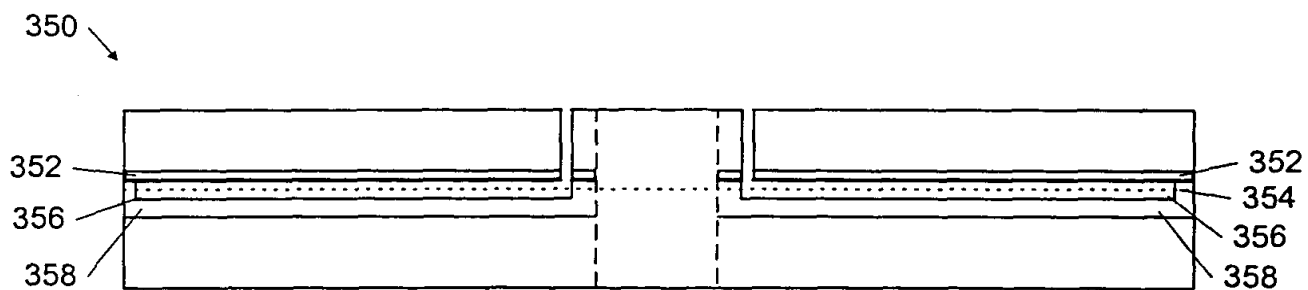


FIG. 29

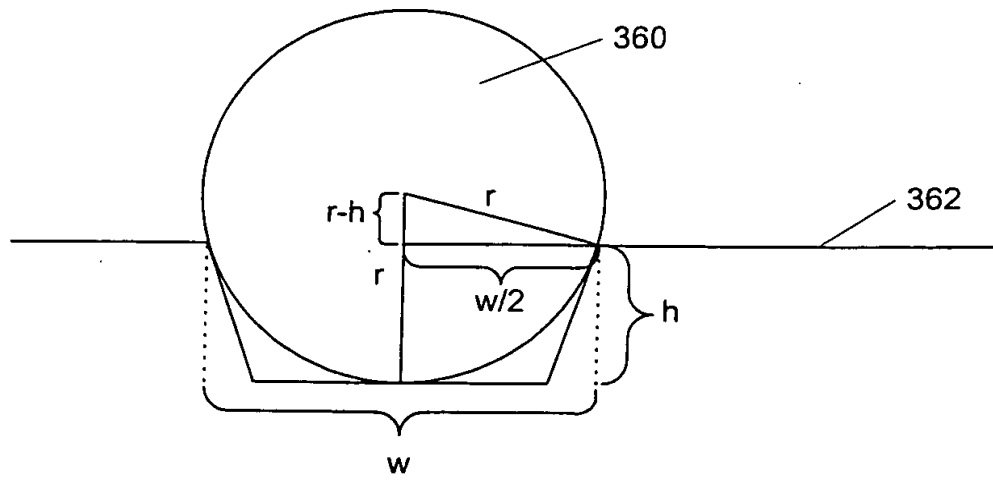
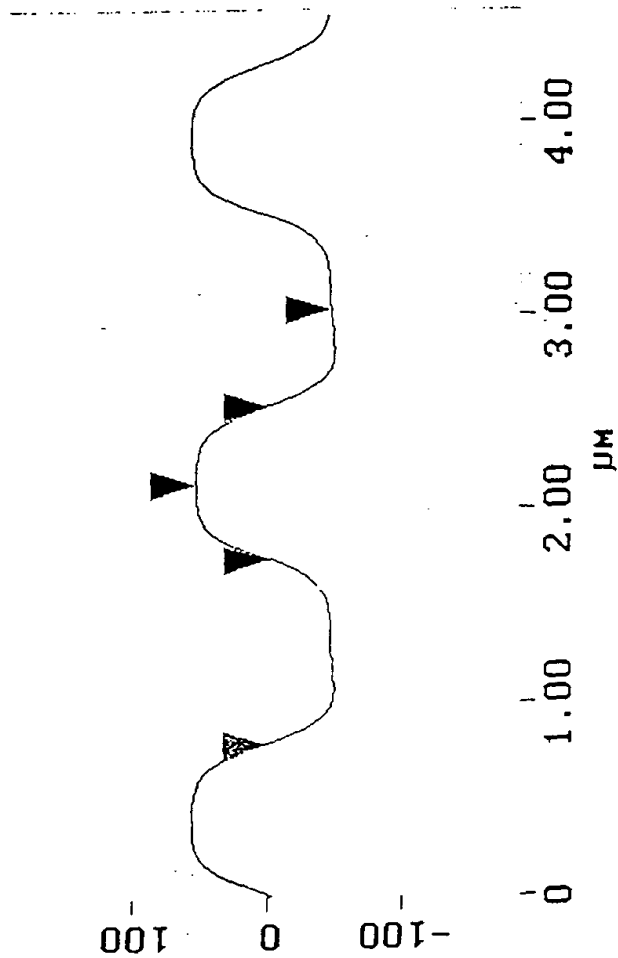
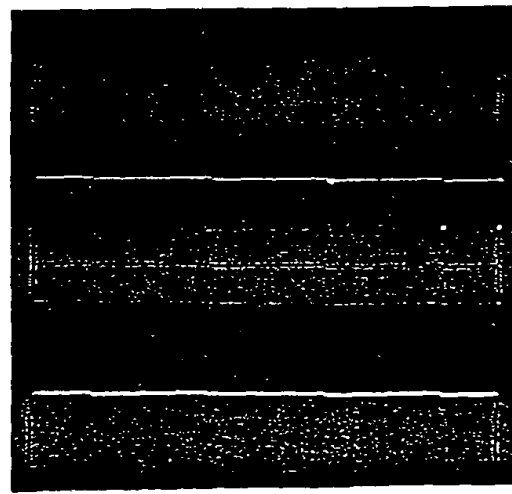


FIG. 30

2025 RELEASE UNDER E.O. 14176



Spectrum



DC Min

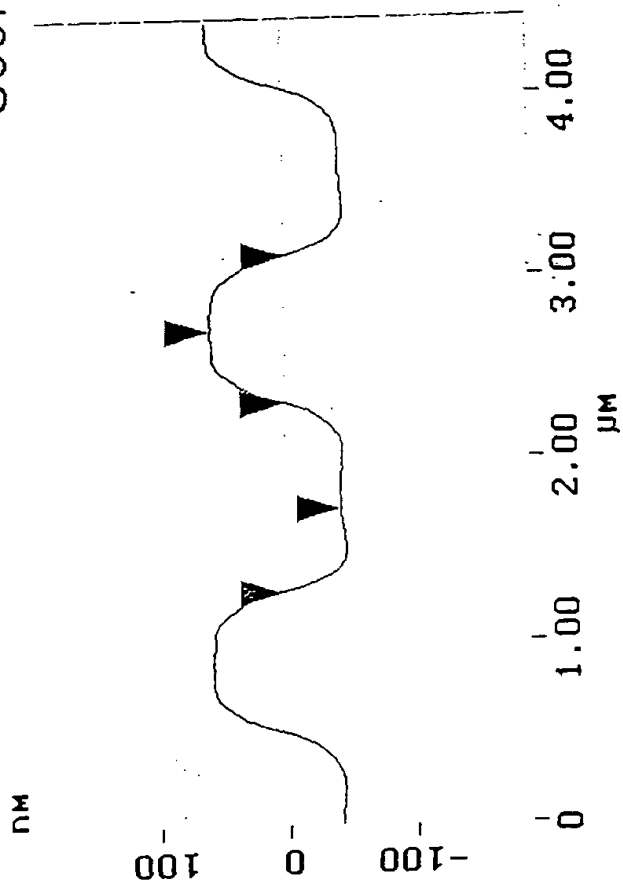
rm159in.000

Cursor: average Zoom: 2:1 Cen line: off Offset: off

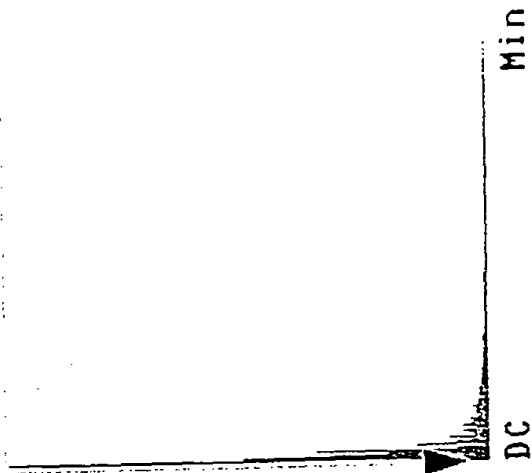
L 800.78 nm
RMS 17.366 nm
Ic DC
Ra(Ic) 13.284 nm
Rmax 57.853 nm
Rz 57.853 nm
Rz Cnt 2
Radius 1.427 μm
Sigma 4.388 nm

Surface distance 912.31 nm
Horiz distance(L) 898.44 nm
Vert distance 100.00 nm
Angle 6.351 deg
Surface distance 969.10 nm
Horiz distance 957.03 nm
Vert distance 7.528 nm
Angle 0.451 deg
Surface distance 817.07 nm
Horiz distance 800.78 nm
Vert distance 0.740 nm
Angle 0.053 deg
Spectral period DC
Spectral freq 0 Hz
Spectral RMS amp 4.523 nm

Section Analysis



Spectrum



rm159out.000

Cursor: average Zoom: 2:1

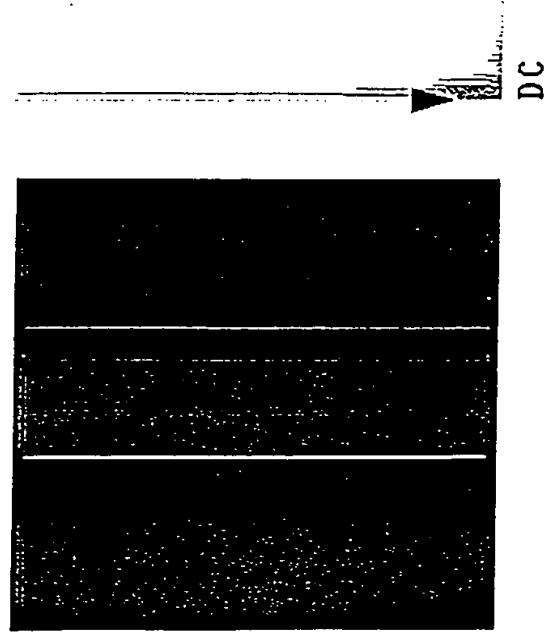
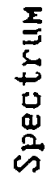
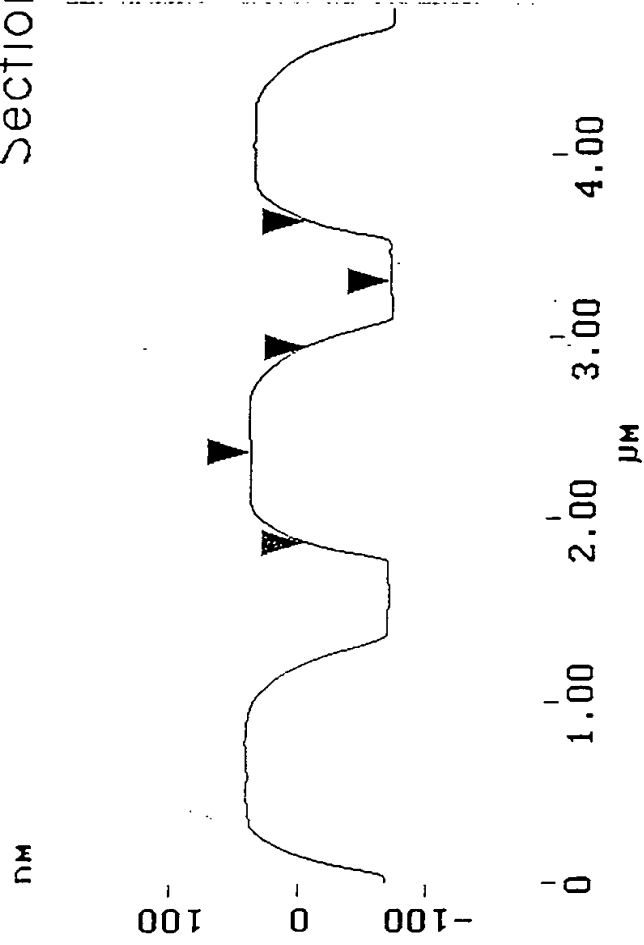
cen line: off offset: off

L	820.31 nm
RMS	18.016 nm
lc	DC
Ra(lc)	13.505 nm
Rmax	62.560 nm
Rz	61.145 nm
Rz Cnt 2	
Radius	1.431 μm
Sigma	5.174 nm

Surface distance	991.89 nm
Horiz distance(L)	976.56 nm
Vert distance	101.23 nm
Angle	5.918 deg
Surface distance	1.050 μm
Horiz distance	1.035 μm
Vert distance	7.648 nm
Angle	0.423 deg
Surface distance	840.65 nm
Horiz distance	820.31 nm
Vert distance	3.315 nm
Angle	0.232 deg
Spectral period	DC
Spectral freq	0 Hz
Spectral RMS amp	1.189 nm

FIG. 32
07121877-103673

Section Analysis



W160in.000

Cursor: average Zoom: 2:1

Can line: off offset: off

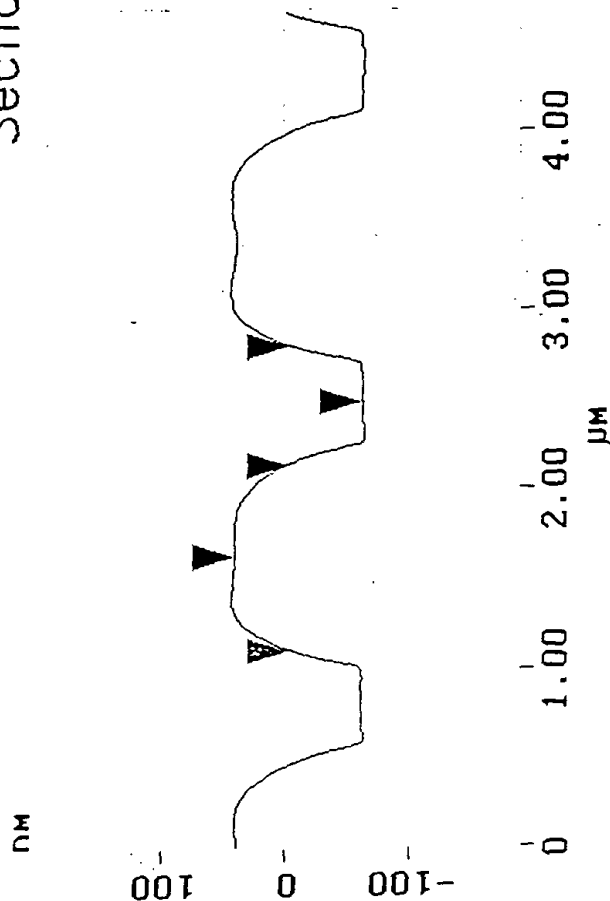
L	683.59 nm
RMS	21.794 nm
Ic	DC
Ra(Ic)	16.951 nm
Rmax	67.772 nm
Rz	66.682 nm
Rz Cnt	2
Radius	820.71 nm
Sigma	8.514 nm

Surface distance	956.26 nm
Horiz distance(L)	937.50 nm
Vert distance	107.52 nm
Angle	6.543 deg
Surface distance	1.084 μ m
Horiz distance	1.074 μ m
Vert distance	4.127 nm
Angle	0.220 deg
Surface distance	715.65 nm
Horiz distance	683.59 nm
Vert distance	3.943 nm
Angle	0.330 deg
Spectral period	DC
Spectral freq	0 Hz
Spectral RMS amp	3.603 nm

FIG. 33

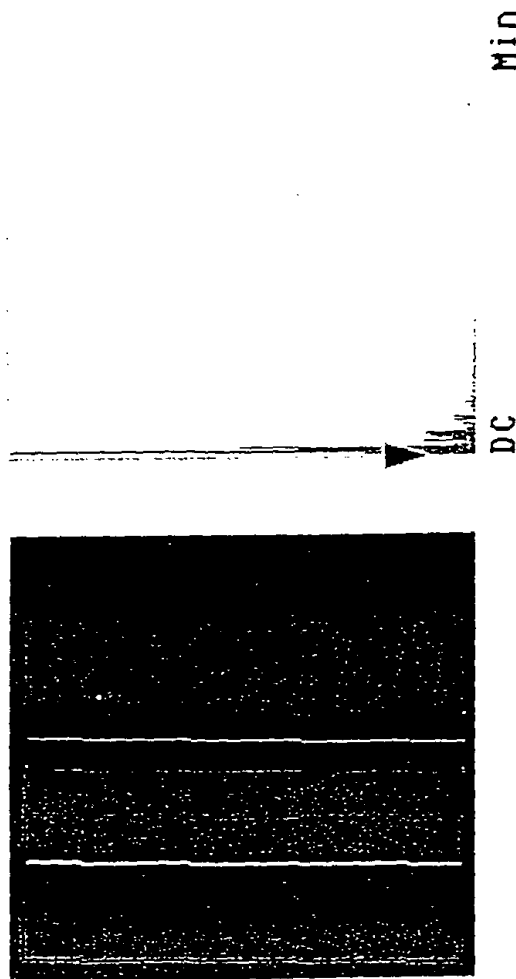
[illegible]

Section Analysis



L	664.06 nm
RMS	20.135 nm
lc	DC
Ra(lc)	14.972 nm
Rmax	66.116 nm
Rz	64.871 nm
Rz Cnt	2
Radius	824.44 nm
Sigma	8.988 nm

Spectrum



Surface distance	878.62 nm
Horiz distance(L)	859.38 nm
Vert distance	102.80 nm
Angle	6.821 deg
Surface distance	1.046 μm
Horiz distance	1.035 μm
Vert distance	4.540 nm
Angle	0.251 deg
Surface distance	695.52 nm
Horiz distance	664.06 nm
Vert distance	2.814 nm
Angle	0.243 deg
Spectral period	DC
Spectral freq	0 Hz
Spectral RMS amp	3.340 nm

m16Dout.000

Cursor: average Zoom: 2:1 Cen line: off Offset: off

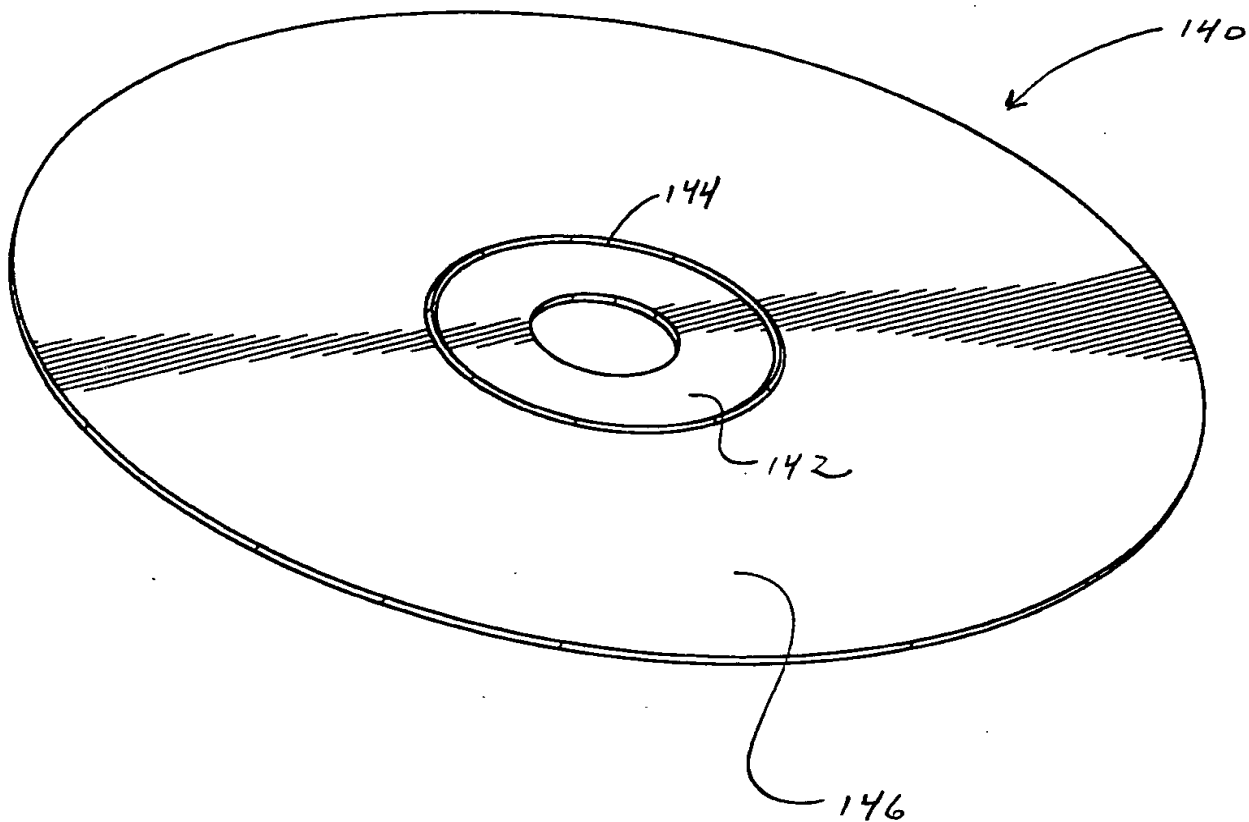


FIG. 35

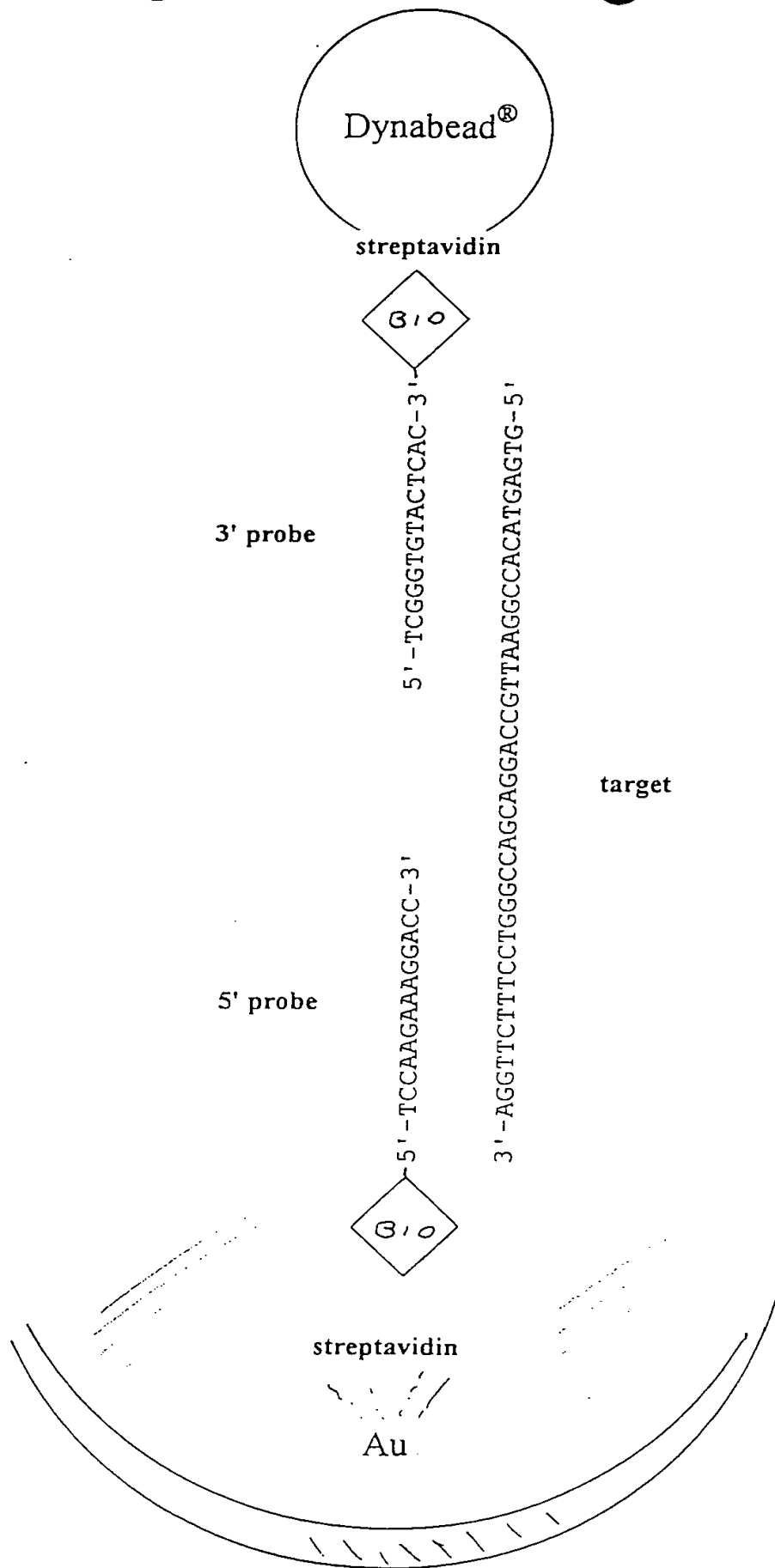
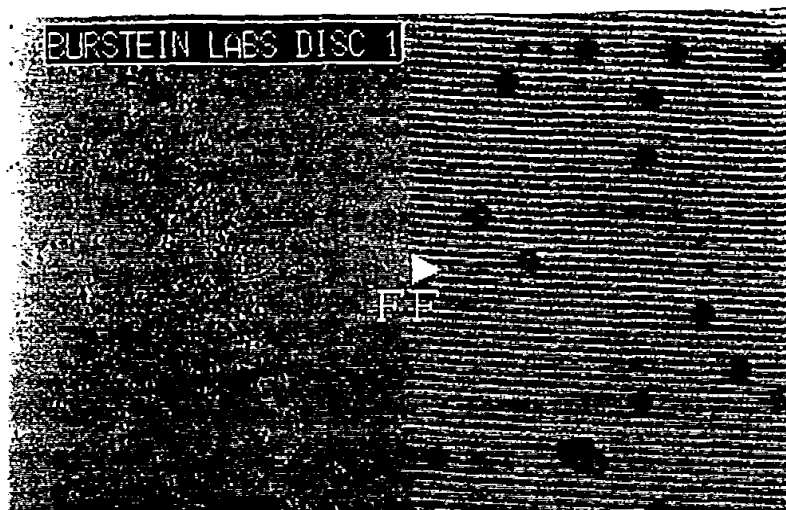
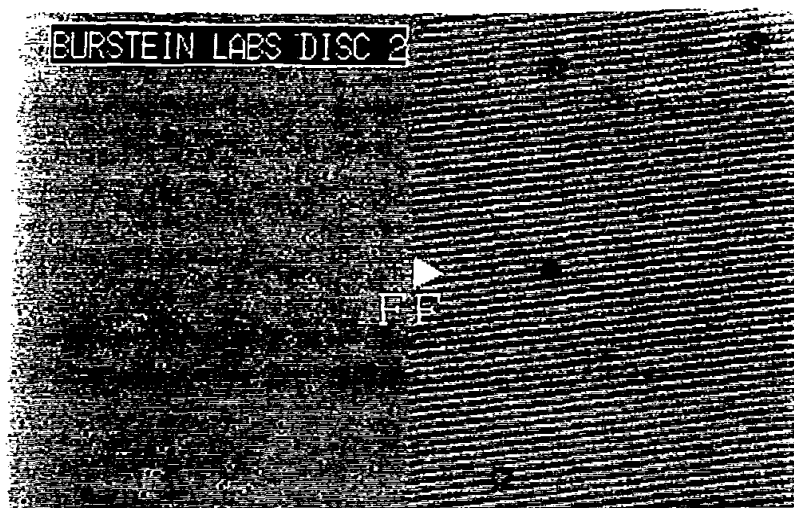


Fig. 36

A
20 femtomoles



B
20 attomoles



C
20 zeptomoles

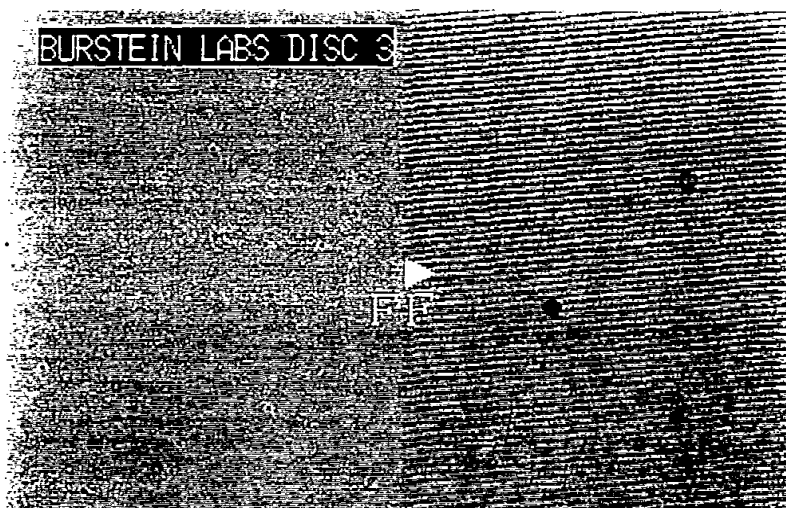


FIG. 37

A high-contrast, black and white photograph of a dark, textured surface, possibly a wall or ceiling, with numerous small, bright, circular spots scattered across it. The spots vary in size and brightness, suggesting reflections or small lights. The overall image is grainy and has a high level of contrast.

FIG. 39

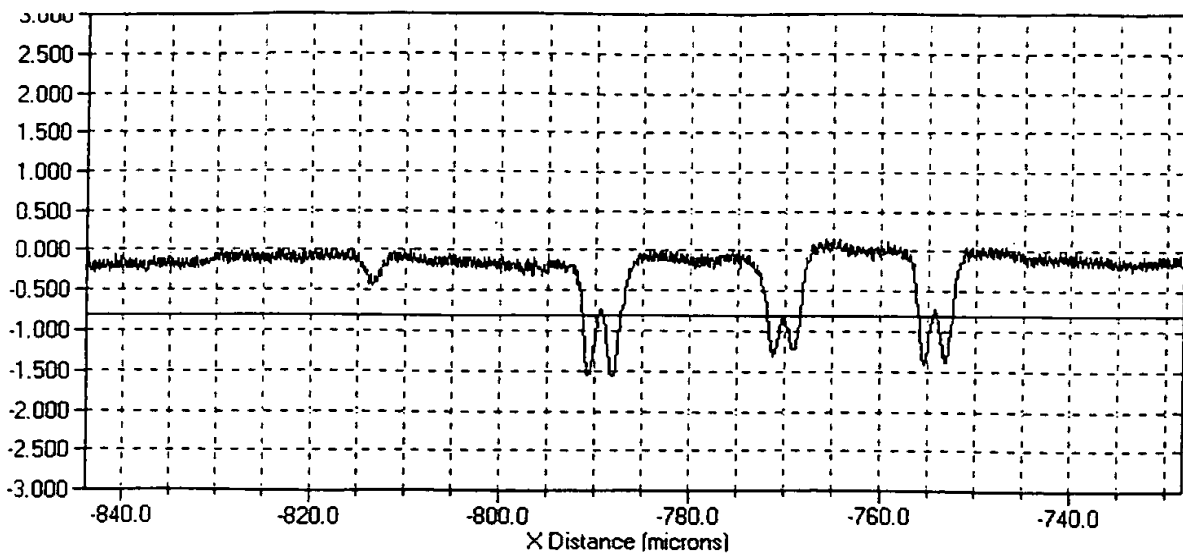


FIG. 40

AWM Muri		Supplementary sheet, mold acceptance test				CD-3-AWM	
Job No.	36-10236	Agent		CR-R	Ram hold	vac + mech	IFPI
SM Order No	9N.96293	Customer		Eximpo CS	Ram dia.	24	Product Code No.
							256

Dimensions		0°	90°	180°	270°	Visual faults
0° = mold at top	R15	1.15	1.155	1.15	1.15	Streaks
Thickness	R40	1.155	1.155	1.155	1.155	Center hole
Center hole	15.05+/-0.03	15.05	Drm. 120+/-0.3	mm		Stacking groove
Weight in g	Min.	0	15	30	45	Info
Measure every 15 min.	g	15.26	15.27	15.26	15.26	Clouds
during test	g		15.26	15.26	15.26	Voids
Max. diff. ± 0.1 g						Black dots
Water in mold	ACTUAL		DESIRED		Tol.	Matt outer edge
Sprue bush	9 ltr./Min.	7			-1/+3	Burrs
Embossor	6 ltr./MIN.	7			-1/+3	Scratches
Vacuum	without	with	diff.	tol.		Diesel effect
Handling	bar					Brown Discoloration
Ram	bar					
Mold function						
Embossor	✓	Raw material				
Sprue ejector	✓	Makrolon 2005	✓			
Ejector sleeve	✓	Lexan 1020				
Sprue bush	✓	Panelite 5503				
Air outlet						
FS dia.	✓					
BS dia.	✓					

Drawn up by:

Fig. 41B

Graph 1. Injection - Holding pressure

Cycle illustrated: 533957
Curve display: continuous

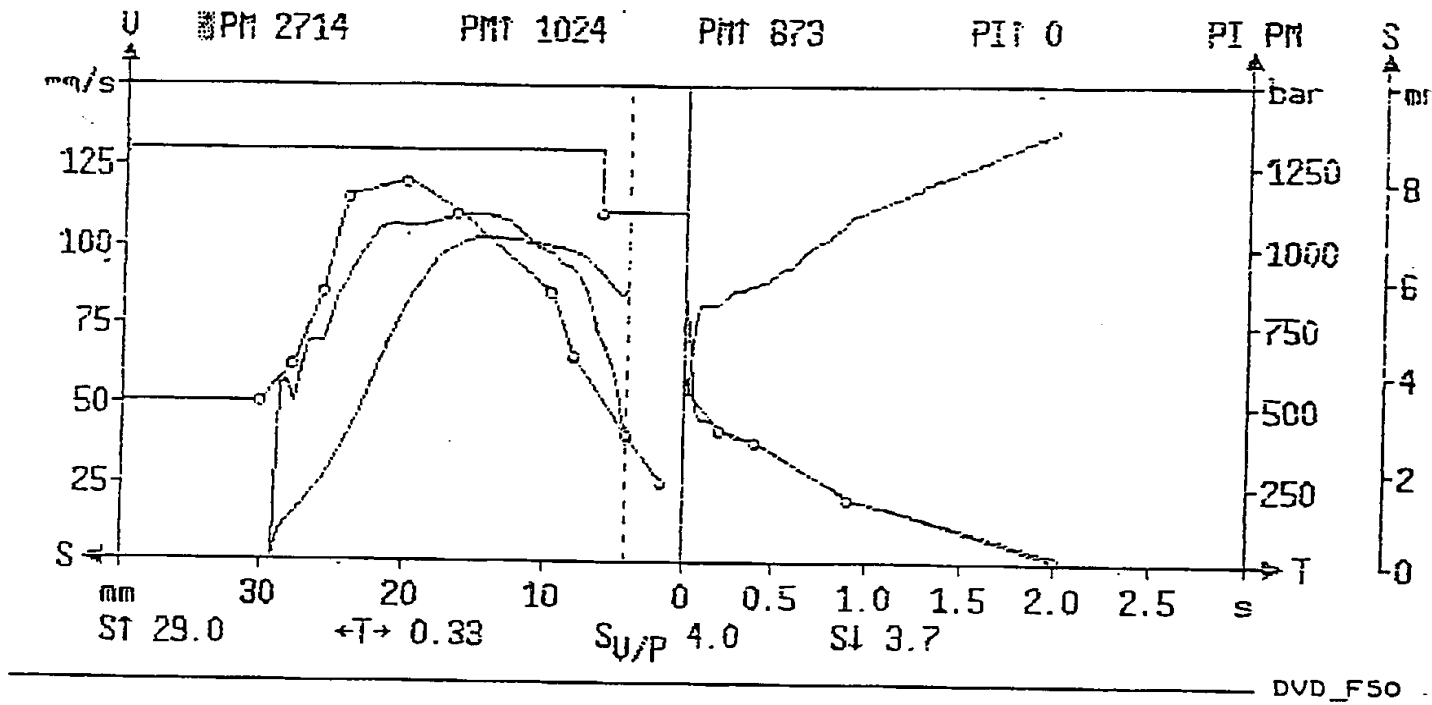


Fig. 41B

Fig. 41C

01.01 Mold movement

Closing movement	V33 = 100%	Closing time S33 =	T32 =	000.
Pressure initiation	V34 = 100%	S34 =		
				019.0mm 000.7mm
Opening movement	V41 = 100%	Opening time S41 =	T36 =	000.
Braking	V42 = 010%			
				055.0mm
Pause time	T40 = 000.000 s	Mold position	S640 =	075.
Mold closing pressures				
Closing pressure	P682 = 085%			
Pressure build-up	p681 = 020%	T681 =		000.10 s
	E608 = 0	Switched off		

02.01 Summary of mold auxiliary controls/robotics

Enable removal	S680 =	0065.0		
Delays				
Blow off sprue	T602 =	000.03		
Advance ejector pin	T53 =	000.10 s		
Transfer stroke forward	T55 =	000.12 s		
Transfer stroke return	T56 =	000.15 s		
Embosser forward	T62 =	001.20 s		
Blow on nozzle side	T75 =	000.50 s		
Blow on moving side	T671 =	000.00		
Unit forward	T680 =	000.70 s		
Starting program	C683 =	00000	T683 =	000.00 s
			S683 =	0004.
Cycle time	T11 =	009.05 s		
Removal time	T640 =	000.70 s		

000.1
000.2
000.1
000.8
000.1

Fig. 41D:

03.01 Metering									
Screw retraction	C17	=	0	Switched off					
Metering Delay	T20	=	000.50 s						
Metering stages	C124	=	2	Metering time	T21	=	005.9		
Metering end point	S23	=	026.0 mm	P23	=	0060 bar	N23	=	100 l.
	S24	=	029.0 mm	P24	=	0010 bar	N24	=	020 l.
Holding pressure	P27	=	0010 bar	Start of injection	SO	=	029.0		
04.01 Injection									
Enable injection	S682	=	0002.0 mm	Screw position	S641	=	029.0		
Injection values	C121	=	10	Start of injection	SO	=	029.0		
	V196	=	0050 mm/s	S196	=	030.0 mm			
	V197	=	0062 mm/s	S197	=	027.6 mm			
	V198	=	0085 mm/s	S198	=	025.6 mm			
	V199	=	0115 mm/s	S199	=	024.0 mm			
	V200	=	0120 mm/s	S200	=	019.8 mm			
	V201	=	0110 mm/s	S201	=	016.2 mm			
	V202	=	0085 mm/s	S202	=	009.5 mm			
	V203	=	0065 mm/s	S203	=	008.0 mm			
	V204	=	0040 mm/s	S204	=	004.0 mm			
Enable V/P changeover	V205	=	0025 mm/s	S205	=	001.5 mm	T2	=	000.3
Forcible changeover				V/P changeover point	S11	=	004.0		
Flow number	S121	=	018.2 mm	S122	=	015.0 mm	C125	=	2776
Pressure monitoring				Peak pressure	P125	=	01044		
First stage	P101	=	01300 bar	T201	=	00.02 s			
Second stage	P102	=	01100 bar	T201	=	00.02 s	S102	=	006.0

Fig. 41D: Injection parameters

Fig. 41F

06.01 Temperature control, plastifier zones/temperature control devices

Zone/description	Set point	Actual value	Tolerance		Heating outputs	Cooling
			minus	plus		
10 Melt temperature	310 •C	305 •C	180 •C	040 •C		
30 Nozzle	330 •C	330 •C	180 •C	040 •C	014%	
13 Nozzle	315 •C	315 •C	180 •C	040 •C	025%	
Cylinder head	310 •C	310 •C	180 •C	040 •C	008%	
15 Compression	305 •C	305 •C	180 •C	040 •C	005%	
16 Compression	305 •C	308 •C	180 •C	040 •C	006%	
18 Feed	300 •C	295 •C	180 •C	040 •C	070%	
20 Inlet	060 •C	060 •C	040 •C	040 •C		024

Zone/description	Set point	Actual value	Tolerance		Heating outputs	Cooling
			minus	plus		
24 Heating/cooling device	112 •C	093 •C	020 •C	020 •C	000%	000
25 Heating/cooling device	114 •C	091 •C	040 •C	020 •C	000%	000

08.01 Disk transfer

Peripheral interface	C684	=	0	Without signal acknowledgement
Buffer switch-off size	C680	=	65000	
Production delay	T682	=	001.00 s	
Max. transfer time	T601	=	001.00 s	With interruption of cycle
			C605	= 0

Fig. 41G

09.01: Production control									
Application	C340	=	2	No application					
Data set number	C315	=	100						
Production sequence									
Item number	C303	=	1	Piece counter	C324	=	29270		
				Cycle counter	C325	=	29270		
Cycle time	T11	=	009.05 s	Failure rate	C718	=	30.56%		
Production preparation				Reason	C357	=	00		
10.01: Process statistics									
Q monitoring	C340	=	2	Monitoring without screening out					
Q report	C700	=	0	No report					
Total				cycles of which				failure rate	
Random sample	C325	=	29270	out of tolerance	C318	=	8946	C718	=
	C326	=	29269		C338	=	8946	C738	=
									30.56%
									30.56%
Process variables									
	Set Point	Tolerance	Actual Value	Mean	Scatter	Out of Tolerance			
	\bar{x}	+/-	\bar{x}	\bar{x}_q	$3s$				
Metering time	1.20	0.30	5.98 s	2.32	5.408	-06786			
Injection start	30.1	2.0	29.0 mm	28.6	0.82	2028			
Injection time	0.47	0.20	0.33s	0.39	0.105	0			
V/P changeover point	3.5	1.0	4.0 mm	4.0	0.04	0			
Melt cushion	4.2	1.0	3.7 mm	3.8	0.25	0			
? peak value	600	200	871 bar	682	99.9	-06566			
? peak value	0		0 bar	0	0.0				
Flow number	2500	300	2776	2441	99.9	359			
Cycle time	3.90	0.50	9.05 s	5.08	6.421	-06570			

Fig. 41G

Fig. 41H

10.02 Configuration of the quality monitoring

Reaction: Process data outside tolerance
Switch-off behavior C703 = 0 no reaction

10.03 Q report intermediate store

Manufacturer
Machine No. DVD_F50

Job data

Fig. 41 I

16.01 System characteristics

Machine data		DVD_F50	
Machine type	DISCJET 600/110	Order number	CEL 10.31
Control version	PAC 13.54	IMC 12.26	23.10.1996
Database version	DB 05.80	Date created	17106
Special	350400	Version	
Mold data			
Installed height	S90 = 160.0 mm		
Plasticizing	Identification C806 = 024	C804 =	0024
Ram nominal diameter	S801 = 032.0 mm	S802 =	100.0
Max. permissible melt pressure	PB00 = 01482 bar	P802 =	01482 bar
Max. permissible backpressure	P801 = 0317 bar		
Temperatures			
Cabinet	Set point/actual value	Heating	Cooling
Oil	TH1 = 035 026 °C	000%	005
	TH2 = 050 051 °C		